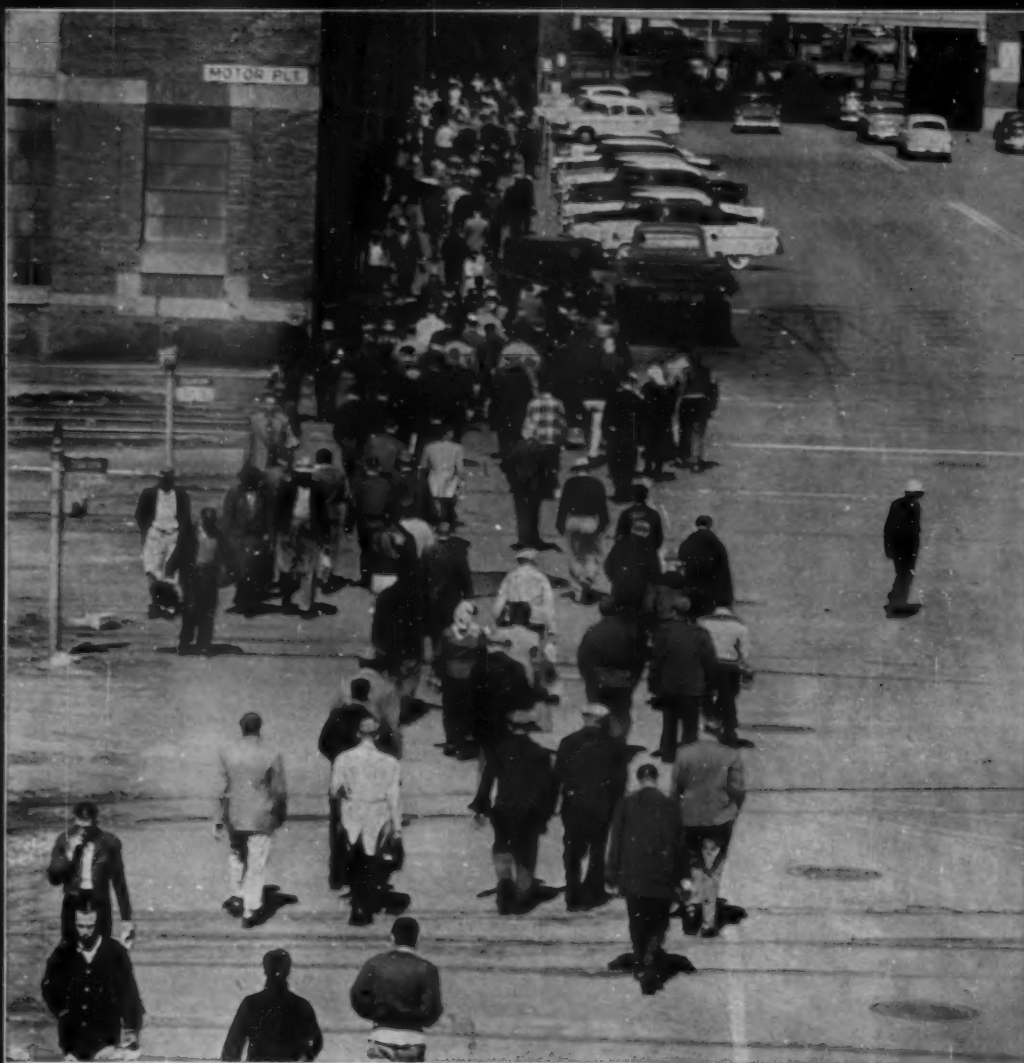


BUSINESS WEEK

This Year's
Executive Payroll

PAGE 103



For auto workers, the question now: How good is SUB? (page 54)

A MCGRAW-HILL PUBLICATION

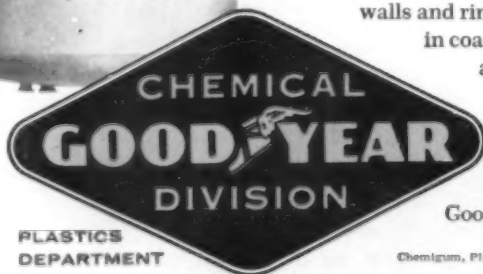
JUNE 2, 1956

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E. B. POWER
UNIVERSITY MICROFILMS
313 N 1ST ST
ANN ARBOR MICH



Photo courtesy Dougherty Industries, Inc., New Richmond, Wisconsin

Secret of staying in the "swim"



PLASTICS
DEPARTMENT

Inflatable pools have become big business, both in size and quantity. Where once only toddlers could enjoy them, now, through improved design and materials, whole families can take a cooling plunge—and many do!

The secret of staying in the "swim" of this fast-growing market, as in any, lies in quality—in a strong, attractive pool built to stand season after season of abuse, plus exposure to water and hot sun. And that's where PLIOVIC comes into the picture.

PLIOVIC is the name for a series of high-quality vinyl resins, each designed to do a specific job. For instance, one type of PLIOVIC is especially suited to making the tough, heavy-gauge sheeting for the walls and rim of a pool, while another type can be used to advantage in coating the fabric bottom and steel wire wall supports. Both achieve the essential physical properties with a minimum of processing and cost problems.

Details on how you can profit with PLIOVIC for pools, or any of the many applications for versatile vinyl resins, are yours by writing to:

Goodyear, Chemical Division, Dept. R-9415, Akron 16, Ohio

Chemigum, Plioflex, Pliolite, Plio-Tuf, Plioric—T.M.'s The Goodyear Tire & Rubber Company, Akron, Ohio

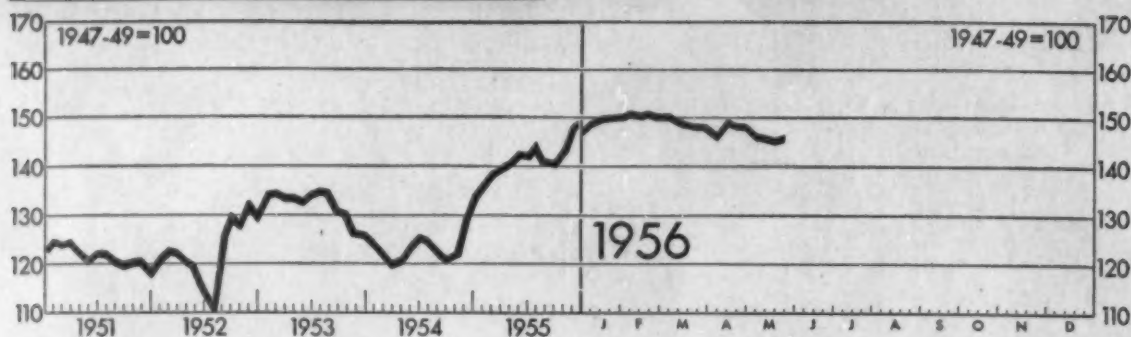
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High Polymer Resins, Rubbers, Latexes and Related Chemicals for the Process Industries

GENERAL BUSINESS	MARKET WITH NO CONFIDENCE. Is the great bull market through?....	25
	WHY INVESTOR CONFIDENCE DROOPS. There's a growing uncertainty about business' short-term outlook.....	26
	WHO INFLUENCES FED? Rep. Patman plans to find out.....	29
	JUNE TAX BORROWING MAY HIT PEAK. Companies are pinched for working capital	30
	THE BIGGEST PUBLIC WORKS IN HISTORY. Multibillion dollar highway program is about ready to move into action July 1.....	31
	JAPAN GETS RICH IN RUSH FOR SHIPS. War- and depression-wracked yards are now world's No. 2 ship makers.....	32
	CHECKING THE FARM SLUMP. Higher supports, soil banks are part of the Administration's efforts to shore up the farmer's income.....	34
	BOIL-UP ON CANADA'S GAS LINE. Canadians lash out at Trans-Canada Pipe Lines' U. S. promoters, but line may be in business soon.....	36
	IN BUSINESS. News about stock option ruling, status of SUB, corporate matrimony, fight over rubber plant.....	38

THE DEPARTMENTS

BUSINESS ABROAD:	More Power for the Latins. American & Foreign Power Co. will spend \$500-million in five years on new sources, including atomic energy.....	129
	In Business Abroad. News about rebuff to U. S. textile industry, Mexican mahogany	136
FINANCE:	Ford Meets the Public With No Pain. Stockholders at first meeting raise no troublesome questions	70
GOVERNMENT:	In Washington. News about tariffs and defense, engineer grads, coffee price.....	143
	Hard Coal: Peace and New Hopes. Glen Alden strike ends as company pledges to pay royalty arrears, Lewis promises to press other delinquents.....	45
LABOR:	As Steel Goes. Wage talks open.....	46
	Stuck in a Rut. Softgoods unions find hard organizing brings little net gain.....	50
	A Tough First Test for SUB. Idle auto workers will find little money, long delays when they start applying for benefits next week.....	54
MANAGEMENT:	Executive Pay: Up With the Boom. Management compensation, like everything else, set records in 1955.....	103
	In Management. News about social science in business, Hertz, railroads.....	126
	Here's How the Oil Companies Are Jumping Into New Markets. Jersey Standard is the latest to join the march.....	145
MARKETING:	Car Price Guides. They list what dealers pay for new cars.....	150
	In Marketing. News about Chesterfield's advertising switch, kitchen remodeling, consumer preferences	153
THE MARKETS:	Commodity Trends Reverse. Business worries weaken prices of industrial raw materials. But food prices stiffen.....	155
	Wall Street Talks.	156
	In Production. News about jewel bearings, rubber plants, commercial titanium... ..	81
PRODUCTION:	Man Makes Mica Better Than Nature. New process converts run-of-the-mill mica into continuous sheet.....	82
	New Products	88
REGIONS:	Governors Who Sell Their States. West Virginia's Marland—and others—feel hunting industry is part of the job.....	166
RESEARCH:	The Income Pattern. March paychecks were the fattest ever.....	174
	Why Industry Woos Cloistered Scientists. Astronomers hold key to many research problems, but play coy.....	92

FIGURES OF THE WEEK



BUSINESS WEEK INDEX (chart)

1946 Average	Year Ago	Month Ago	Week Ago	\$ Latest Week
91.6	143.4	148.5	†145.7	*146.6

PRODUCTION

Steel ingot (thous. of tons).....	1,281	2,312	2,373	12,396	3,375
Automobiles and trucks.....	62,880	209,939	163,224	141,069	139,409
Engineering const. awards (Eng. News-Rec. 4-wk daily av. in thous.).....	\$17,083	\$72,230	\$82,551	\$64,883	\$72,115
Electric power (millions of kilowatt-hours).....	4,238	9,976	10,867	10,875	10,927
Crude oil and condensate (daily av., thous. of bbls.).....	4,751	6,655	7,146	7,071	N.A.
Bituminous coal (daily av., thous. of tons).....	1,745	1,524	1,650	†1,670	1,633
Paperboard (tons).....	167,269	274,342	293,282	285,921	285,603

TRADE

Carloadings: miscellaneous and L.C.I. (daily av., thous. of cars).....	82	75	75	73	74
Carloadings: all others (daily av., thous. of cars).....	53	54	52	57	56
Department store sales (change from same wk of preceding year).....	+30%	+8%	+1%	+19%	+6%
Business failures (Dun & Bradstreet, number).....	22	204	236	279	273

PRICES

Spot commodities, daily index (Moody's, Dec. 31, 1931 = 100).....	311.9	397.7	420.8	419.6	414.5
Industrial raw materials, daily index (BLS, 1947-49 = 100).....	†173.2	90.9	98.3	96.3	94.5
Foodstuffs, daily index (BLS, 1947-49 = 100).....	†175.4	86.4	83.1	82.9	82.0
Print cloth (spot and nearby, yd.).....	17.5¢	18.7¢	19.4¢	19.2¢	19.1¢
Finished steel, index (BLS, 1947-49 = 100).....	†176.4	144.8	157.1	†158.1	158.1
Scrap steel composite (Iron Age, ton).....	\$20.27	\$34.00	\$55.00	\$49.67	\$47.50
Copper (electrolytic, delivered price, E & M.J. lb.).....	14.045¢	36.000¢	45.775¢	45.890¢	45.788¢
Wheat (No. 2, hard and dark hard winter, Kansas City, bu.).....	\$1.97	\$2.59	\$2.29	\$2.30	\$2.20
Cotton, daily price (middling, 14 designated markets, lb.).....	**30.56¢	33.66¢	35.44¢	35.42¢	35.50¢
Wool tops (Boston, lb.).....	\$1.51	\$1.90	\$1.73	\$1.72	\$1.72

FINANCE

90 stocks, price index (Standard & Poor's).....	135.7	301.1	381.5	364.1	354.2
Medium grade corporate bond yield (Baa issues, Moody's).....	3.05%	3.50%	3.72%	3.73%	3.73%
Prime commercial paper, 4 to 6 months, N. Y. City (prevailing rate).....	¾-1%	2%	3¼%	3¼%	3¼%

BANKING (Millions of Dollars)

Demand deposits adjusted, reporting member banks.....	††45,820	56,437	56,908	54,999	N.A.
Total loans and investments, reporting member banks.....	††71,916	84,280	85,340	85,241	N.A.
Commercial and agricultural loans, reporting member banks.....	††9,299	22,641	27,842	28,203	N.A.
U. S. gov't guaranteed obligations held, reporting member banks.....	††49,879	33,296	37,509	27,082	N.A.
Total federal reserve credit outstanding.....	23,888	24,834	25,374	25,298	25,310

MONTHLY FIGURES OF THE WEEK

McGraw-Hill Indexes of New Orders (1950 = 100)	1946 Average	Year Ago	Month Ago	Latest Month
New Orders for machinery, except electrical..... April.....	N.A.	110	141	143
Construction & mining machinery..... April.....	N.A.	123	190	164
Engines & turbines..... April.....	N.A.	127	169	165
Pumps & compressors..... April.....	N.A.	156	132	154
Metalworking machinery..... April.....	N.A.	100	223	207
Other industrial machinery..... April.....	N.A.	104	145	128
Office equipment..... April.....	N.A.	114	152	135
New contracts for industrial building..... April.....	N.A.	140	276	303

* Preliminary, week ended May 26, 1956.
† Revised.

†† Estimate.
** Ten designated markets.

N.A.—Not available.
‡ Date for 'Latest Week' on each series on request.

THE PICTURES—Black Star—32, 33; Borden Co.—110 (lt.); The Coca Cola Co.—116 (rt.); Columbia Broadcasting System, Inc.—120 (lt.); Dow Chemical Co.—84; du Pont de Nemours—108 (lt.); Ford Motor Co.—67 (lt.); General Motors Corp.—103 (bot.); Martin Harris—114 (rt.); I.N.P.—29 (top rt. & lt. cen.); Bob Isaac—29 (top lt.); 106; Herb Krotovil—29 (bot. rt.); 34, 103, (top); Bob Landry—92, 93 (top); 94; Mica Insulator Co.—82; Ed Nano—70, 71, 72; Palomar Observatory—93 (bot.); Bob Phillips—29, (bot. lt.); Procter & Gamble Co.—110 (rt.); Gene Pyle—166, 167; Mike Shea—116 (lt.); U.P.—108 (rt.); 114 (lt.); U.S. Steel—122 (rt.); Gordon Tenney—Cover; F. W. Woolworth Co.—122 (lt.); John Zimmerman—67 (rt.).



Vice-President Robert Popper, J. S. Popper, Inc., with a telephone booth lighting fixture his company sells to Western Electric. J. S. Popper is one of 27,000 "small businesses" from which we made purchases last year.

Why did 30,000 other firms get \$1 billion from Western Electric in 1955?

Frankly, we bought materials, components, supplies and services from 30,000 other firms last year because they could help us do our job better as the manufacturing and supply unit of the Bell System.

These firms, large and small, were located all over the country . . . in over 3,000 cities and towns, in all 48 states. Ninety percent were "small businesses" having fewer than 500 employees. Some were doing business with us for the first time; others had worked with us since before the turn of the century. All helped . . . and for that help they received over half of our gross receipts — and our thanks!

How did they help?

From some came the thousands of tons of raw materials, machinery and components we needed

in our own plants to *make* things for the Bell telephone companies. From others came thousands of kinds of articles to stock our distribution centers which serve the Bell telephone companies.

The carrying out of a centralized Bell System purchasing program by Western Electric in conjunction with its manufacturing program is an important reason why the Bell telephone companies can provide good, dependable telephone service at reasonable cost—a cost lower than otherwise would be possible.

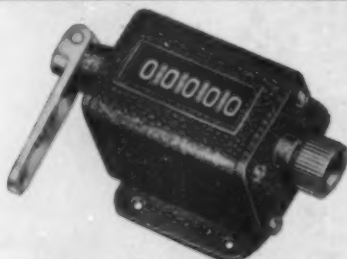
Western Electric

 MANUFACTURING AND SUPPLY UNIT OF THE BELL SYSTEM



Why is COUNTROL important in every business today?

Countless times a day, every business needs to know "how many? . . . how much? . . . how far? . . ." and many other questions that can be answered only by facts-in-figures. But how to get these figures . . . from so many different machines, processes, operations and systems? Veeder-Root Counters are doing it every day, by means of:



MECHANICAL COUNTING

Small Resets count strokes, turns, or pieces . . . are used by thousands for moderate duty in parts inspection, quality control, conveyors, machine tools, light presses, etc.



HAND COUNTING

Where objects or units cannot be counted electrically or mechanically, hand-operated counters like this Hand Tally do the job. For instance, quick spot checks of production or performance, traffic count, inventory, etc. Fits palm of hand, counts one for each pressure of thumb lever, resets to zero by turning knob.



ELECTRICAL COUNTING

These remote-indicating counters bring your production machines as close as your office wall. AC or DC, they can be connected in series with any simple switch, and will transmit production figures *instantly* over any distance. May be panel-mounted in groups.



CONTROLLING

Set it for the exact number of turns, pieces, or operations required . . . and this Predetermining Counter will control the run *exactly* . . . preventing over-runs and shortages. When the predetermined number is reached, counter will light a light, ring a bell, or actuate a stop-motion.

IN SUM: If it can be counted or controlled . . . count on Veeder-Root to do it. Get in touch with your Industrial Supply Distributor for standard counters for application to your production machines and processes. And get in touch with Veeder-Root for counters to be built into original equipment. **Veeder-Root Inc., Hartford 2, Connecticut.**

Insist on Standard
**VEEDER-ROOT
COUNTERS**

from your Industrial
Supply Distributor



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READERS REPORT

Cashing In On Seaway

Dear Sir:

Permit me to congratulate you on the excellent article Cashing In On the Seaway [BW—May 12'56, p185].

This is very good coverage on the Port of Milwaukee and from everything I can gather, I predict that Milwaukee's wish to become a world port will become a reality in a few short years.

DONALD M. COUNIHAN
CARRETTA & COUNIHAN
WASHINGTON, D. C.


NLRB Spotlight

Dear Sir:

The recent Williamson-Dickie case before the NLRB, according to an opinion expressed in In Labor [BW—Mar. 3'56, p134] was a departure from the board's Livingston Shirt and Peerless Plywood doctrines. After reading the facts of the case, I find that the board made no such alteration in policy.

In the case at point, the president of the Williamson-Dickie Manufacturing Co. prohibited union solicitation of workers during non-working hours. When representatives of the union asked company permission to address the employees on company time, the request was refused. The employer had been active in interrogating employees in regard to their union activity and threatened reprisal for their pro-union acts. The board, relying on the Livingston Shirt precedent, ruled that the employer had violated the National Labor Relations Act, as amended, by refusing to allow the union an "equal opportunity" to speak to the employees.

Under the earlier Bonwit Teller doctrine, the board had ruled that representatives of a union should be given an "equal opportunity" to address employees, in cases where the employer had spoken to a "captive audience." Livingston Shirt rejected this policy by allowing the union such an opportunity only when the employer had used his time and premises for addressing employees and one of the following conditions was present: (1) the employer enforced an unlawful broad no-solicitation rule (unions were denied access to company premises during non-working hours), or (2) the employer enforced a lawful (because of the nature of the business) broad no-solicitation rule. In the instant case, Williamson-Dickie



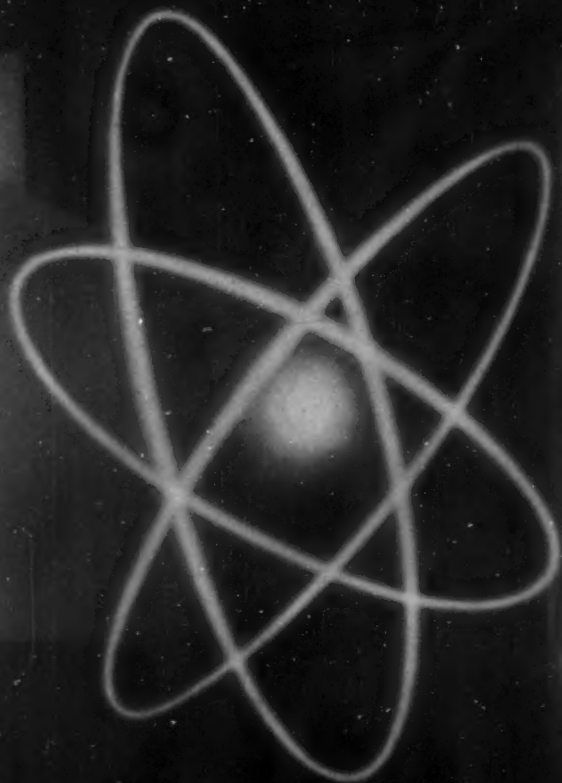
RURAL COOPERATIVE POWER ASSO
OWNED BY THOSE IT SERVES

AMF

AMF Atomic

With the announcement of the AMF power reactor for the Rural Cooperative Power Association at Elk River, Minnesota, AMF ATOMICS takes another major step toward making low-cost atomic power an everyday reality.

This new AMF power reactor, of the closed-cycle boiling water type, promises to produce competitive power at Elk River from the start. Here it is designed to provide 22,000 kilowatts of net electrical power, at or below a generating cost of 8 mills per kilowatt hour...making atomic power *competitive now* for small-load centers and remote areas where current generating costs are high.



ATOMIC POWER at Elk River

power installation points the way to *low-cost atomic power* anywhere in the world

Simple in basic design and adaptable to a wide range of steam conditions, the AMF reactor can be easily incorporated in existing steam-plant installations. And forward-thinking AMF "Unitized" engineering permits easy modification to accommodate more advanced fuels as the technology progresses. It thus offers not only efficient power at the outset, but progressively *lower power costs* as the science of nuclear energy inevitably advances.

Consider the potential role of atomic power for *your* utility, industry, or plant application, here or abroad. And discuss it with AMF ATOMICS. Plan *now* for the day fast approaching when efficient *atomic* power will be a competitive necessity.



ATOMICS

Engineering and Manufacturing Service

AMF ATOMICS Inc.

AMF Building • 261 Madison Ave. • New York 16, N. Y.

Subsidiary of AMERICAN MACHINE & FOUNDRY COMPANY

General Electric announces new
"Power-Groove" fluorescent lamp that gives . . .

Twice as much the same length



IT'S THE GROOVES THAT MAKE TWICE AS

Revolutionary new tube design makes G-E "Power-Groove" the most economical fluorescent light source ever developed

GENERAL ELECTRIC lamp engineers have now developed the new G-E Power-Groove Fluorescent Lamp that gives approximately twice as much light as any other fluorescent (and almost three times as much as the 8-foot slimline) with substantially the same efficiency. Now you can get twice the light or more from the same number of lamps—or equal light with half the lamps! Whichever way you use them, you'll save at least 20% in your initial cost of fluorescent lighting . . . and have fewer parts to maintain.

THE POWER-GROOVE LAMPS will be made in the economical 8-foot lengths—approximately 200 watts. They will have double contact recessed bases and will operate on the Rapid Start principle. Four-foot lamps will be available for filling in ends of rows and other special applications. Power-Groove lamps in presently planned sizes will not be interchangeable in any present fluorescent lighting system.

More light at lower cost! *Power-Groove gives a greater increase in light-per-foot than all other combined increases made since G. E. first introduced fluorescent lamps back in 1938!*

OPENS UP NEW USES FOR FLUORESCENTS—G-E Power-Groove lamps will be used extensively for general lighting in stores, offices and industrial plants. Many industrial areas that use filament or mercury lamps can now enjoy the benefits of fluorescent lighting. Besides giving twice as much light, G-E Power-Groove lamps main-

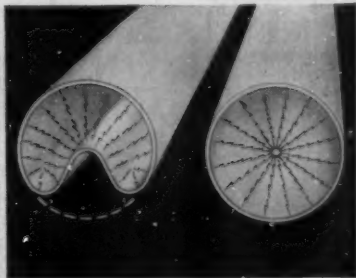
light from tube!

MUCH LIGHT POSSIBLE

tain their high light level even at low temperatures, and will therefore, be excellent for outdoor fluorescent lighting.

HOW SOON?—By late Fall, General Electric will be producing Power-Groove lamps in quantity—and, at that time, newly-designed fixtures and ballasts are expected to be available. So, if your lighting plans include installations in 1957, plan on new G-E Power-Groove Fluorescent Lamps! For more information, write: General Electric Large Lamp Dept. BW-6, Nela Park, Cleveland 12, Ohio.

COMPARE the new G-E Power-Groove design (left) with ordinary fluorescent lamps. See how the grooves bring the light-producing phosphor coating on the inside wall of the lamp closer to the ultraviolet radiation. Because this energy travels a shorter distance, internal light losses are reduced. It's this radical new design that makes it possible for the G-E Power-Groove to give twice as much light with substantially the same efficiency.



Progress Is Our Most Important Product

GENERAL  ELECTRIC

Nela Park...

where fluorescent lamp improvements are born

In 1939, scientists at Nela Park, G-E Lamp headquarters, developed the first practical fluorescent lamp. It was the most efficient lighting tool known. Since then, G-E scientists have introduced hundreds of improvements, dozens of new types—making fluorescent lighting still more efficient, practical and versatile. Thus, fluorescent lighting is standard today in millions of factories, offices, stores, schools.



Here are the men who were most closely associated with developing the G-E Power-Groove fluorescent, the most powerful fluorescent lamp available today. Left to right—J. O. Aicher, R. Lemmers, G. E. Inman.

Here are a few of the major G-E fluorescent improvements:

- 1939**—40-watt fluorescent—today's most widely used fluorescent.
- 1940**—100-watt fluorescent—first big increase in light per foot of tube.
- 1943**—Circline—first circular shape; popular for home use.
- 1944**—Instant Start—starters eliminated for the first time.
- 1944**—Slimline—Longer unbroken lines of light—lower cost of light, too.
- 1948**—85-watt—same light output as 100-watt; 15% more efficient.
- 1949**—DeLuxe Cool and Warm White—first fluorescents with balanced color rendition.
- 1952**—Rapid Start—Eliminated starters at no increased cost of light. Opened door to High Output fluorescent, flashing fluorescents, and Power-Groove.
- 1954**—High Output fluorescent—40% more light from same length tube.
- 1956**—Power-Groove—High efficiency and improved design give twice as much light as High Output... up till now the most powerful fluorescent.

Not only have General Electric scientists at Nela Park developed new Lamps, but they are constantly improving existing types. For instance, since 1950, the light output of the G-E 40-watt has been increased 30%. Yet the net price to case quantity buyers is lower. Lamp improvements and developments like these give you better light, more light... it's why General Electric Lamps give you more for all your lighting dollars.

WIRE FOR EVERY ELECTRICAL & ELECTRONIC PRODUCT



Belden

WIREFORMER FOR INDUSTRY
SINCE 1902

An ever-increasing number of insulations for an ever-increasing number of electrical and electronic products puts growing emphasis on specialized wires engineered for the job. Your engineered product merits Belden wire engineering service.

Belden Manufacturing Company
Chicago 80, Illinois

★ PATENTED

BELDEN WIRES FOR EVERYTHING ELECTRICAL INCLUDING:

Magnet Wire
Lead and Fixture Wire
Power Supply Cords,
Cord Sets and Portable Cord

Aircraft Wires
Electrical Household
Replacement Cords

Electronic Wires
Welding Cable
Automotive Replacement
Wire and Cable

had a broad no-solicitation rule which was declared to be "unlawful" by the board. Since the employer had used company time and premises to talk to employees concerning the union, the board held that "equal opportunity" must be granted to the union.

Peerless Plywood, which deals with employer or union speeches during a 24-hour period directly preceding a representation election, is not involved here.

There appears to be no deviation, therefore, from the Livingston Shirt doctrine.

STEPHEN A. ZEFF
SCHOOL OF BUSINESS
UNIV. OF COLORADO
BOULDER, COLO.

• Reader Zeff has some merit when he cites the language of the two decisions. But the important thing is the emphasis that the board made in each decision. Most legal experts, after the Livingston decision, saw a complete overthrow of the Bonwit decision. In that case, the board pinpointed the requirement that an employer must grant the union time to answer his statements. In the most recent case mentioned in *In Labor* to which Reader Zeff referred, NLRB merely strengthened and spotlighted the caveats mentioned in Peerless and Livingston.

Crossing the Delaware

Dear Sir:

The Ford Motor Co. is moving across the Delaware River to Pensauken, New Jersey—not New York as stated in your *In Regions* article [BW—May 19'56, p189].

J. R. VINE

HADDONFIELD, N. J.

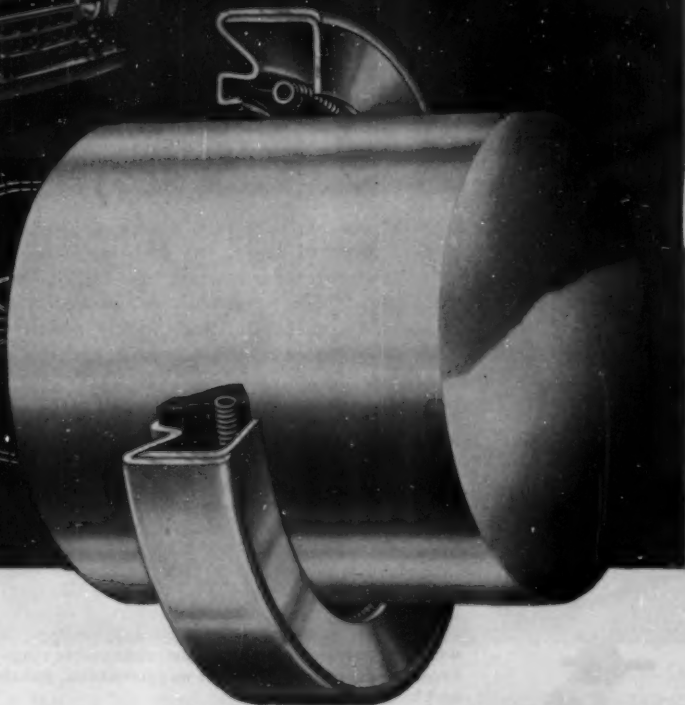
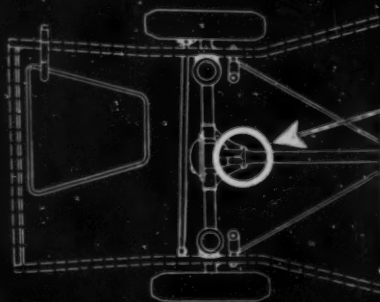
A Matter of Policy

Dear Sir:

In quite properly reporting the fact that the Federal Home Loan Bank Board had relaxed the borrowing privilege accorded to its member savings and loan associations [BW—Apr. 28'56, p25—A New Feud Over Credit Policy] you make the statement that under the new provisions all such associations will be able to borrow up to 10% of their "savings deposits" from the F.H.L.B., as compared to a previous ceiling of 5%.

... Federal Savings and Loan Associations are not permitted by law to receive money on deposit or to advertise their share accounts as deposits. This for the simple reason that no debtor-creditor rela-

Rugged seal for a Rambler



LOCKS E. P. LUBE IN FOR A FAST PINION

In the dashing, new Rambler, the rear pinion may turn up to 3800 rpm—and, on a hot day, lube temperature may run 250° or more . . . and it is vital that the E.P. lubricant protecting this pinion be retained under all operating conditions. American Motors posed this key problem to Chicago Rawhide: provide a pinion seal that would more than withstand the temperature involved, and equally important, resist the deteriorating effects of a high sulphur content in E.P. lubricants. C/R engineers recommended the new C/R Type W Oil Seal. Result: this unique seal is delivering positive, dependable sealing performance under the most rugged road conditions.

Do you have a difficult sealing problem? C/R engineers

will welcome the opportunity to work with you in the selection of the correct seal style and material for your application. Write for detailed information.

More automobiles, farm and industrial machines rely on C/R Oil Seals than on any similar sealing device.

CHICAGO RAWHIDE MANUFACTURING COMPANY
1207 Elston Avenue • Chicago 22, Illinois

Offices in 55 principal cities. See your telephone book.

In Canada: Manufactured and Distributed by Super Oil Seal Mfg. Co., Ltd., Hamilton, Ontario

Export Sales: Geon International Corp., Great Neck, New York



Other C/R Products

Sirvene (synthetic rubber) molded pliable parts • Sirvis-Conpor mechanical leather cups, packings, boots • C/R Non-metallic Gears

No more drudgery for me in cleaning grease-caked floors



His boss is happy too . . .

and should be. Now an Industrial Dry-Scrubber, Finnell's 84XR, does the job in about one-tenth the man-hour time required to hand-scrape the floors! And of course the machine is far more thorough, and spares maintenance men the back-breaking effort of manual methods. Equipped with two powerful scuffing brushes, the 84XR digs through and quickly loosens even the most stubborn coatings of dirt, oil, grease, and shavings. Universal couplings enable the brushes to clean recessed areas that rigid coupling brushes would pass over and miss.

Reversible motor keeps wires sharp. A flip of the switch reverses the rotation of the brushes and re-sharpens them automatically . . . while working! Eliminates the need for frequent changing of brushes by hand in order to maintain a sharp cutting edge. Reversal of brush rotation also helps keep the brushes functioning efficiently by ejecting sticky substances that would otherwise clog and slow up the cleaning process. Total brush spread of the 84XR is 22 inches. Low, compact design permits cleaning right up to and beneath machinery—areas where deposits are heaviest. Interchangeable rings and brushes adapt the machine to wet-scrubbing, polishing, and steel-wooling.

Clean floors allow industrial trucks to move swiftly, surely and, according to actual tests, with half the pull it takes to move loads over dirty floors. In addition, clean floors aid safety underfoot and contribute to worker productivity. So it pays to keep floors clean—especially with a labor-saving 84XR! (The Vacuum Cleaner illustrated, Finnell's 10B for wet and dry pick-up, features a By-Pass Motor.)

For demonstration, consultation, or literature, phone or write nearest Finnell Branch or Finnell System, Inc., 3806A East St., Elkhart, Ind. Branch Offices in all principal cities of the United States and Canada.

A flip of the switch
re-sharpens brushes
automatically!



Brushes adjust
to floor
irregularities

FINNELL SYSTEM, INC.

Originators of
Power Scrubbing and Polishing Machines



BRANCHES
IN ALL
PRINCIPAL
CITIES

tionship exists between such an association and its shareholders. Opinions differ as to the significance of this distinction, but the fact remains that its non-observance, particularly by a reliable publication such as BUSINESS WEEK, contributed to the public's mistaken belief that Federal Savings and Loan Associations are banks of deposit.

This they are not, hence those who maintain accounts with them are shareholders and not depositors.

DONALDSON CRESSWELL
SENIOR VICE-PRESIDENT
THE PHILADELPHIA SAVING
FUND SOCIETY
PHILADELPHIA, PA.

A Big Appetite

Dear Sir:

Your Special Report Selling to an Age of Plenty [BW—May '56, p121] is most interesting and certainly well done. Although I am a clergyman, I read BUSINESS WEEK to keep aware of business trends in general and find it beneficial for understanding the problems of my parishioners. . . .

I got a chuckle out of the last of the "conditions that have brought about our present high-level consumption . . . an increase in leisure time has wetted people's appetite" (page 130) for goods and services of all kinds.

I am afraid it has—too much. . . .

HAYES H. WEBSTER

PASTOR
FIRST CHRISTIAN CHURCH
WEST POINT, GA.

• Reader Webster is correct. It should have been whetted.

Dear Sir:

Here is an item which appeared in our Executive Report last week: "Worth reading . . . Selling to an Age of Plenty, a Special Report in Business Week, May 5 issue, is an analysis of the modern consumer, new roles played by advertising, salesmanship, psychology. More creative selling is necessary."


This Executive Report is sent weekly to all of our member store executives. We felt that your article merited their attention.

T. J. CARROLL
VICE-PRESIDENT AND GENERAL
MANAGER
FREDERICK ATKINS, INC.
NEW YORK, N. Y.

Capital Spending

Dear Sir:

For some time now, BUSINESS WEEK has been making a great con-



*"But why lay you off
when they're working nights?"*

How COME Schmidt's taking his ease on Tuesday morning? His foreman will tell you there just isn't enough work to keep him busy.

A production slow-up in drop-forging means no parts to assemble. So assembly-worker Schmidt is temporarily laid off, while others go into overtime to get things back to normal. Shipments are delayed. Customers are getting sore, and profits are taking a beating.

Keysort punched-card accounting could have kept Schmidt on the job. With a weekly work-load summary to indicate

drop-forging's predicament, management could have taken the corrective step of adding an extra shift there *on time*. And *prompt* action would have resulted in an even flow of work into assembly — and full production.

McBee Keysort can give you *fast, accurate* reports on every phase of factory operation. Whatever your size or set-up. At remarkably low cost.

The trained McBee man near you has a presentation which will show you how it's done. *It will take him just one hour from start to finish*. Phone him, or write us.

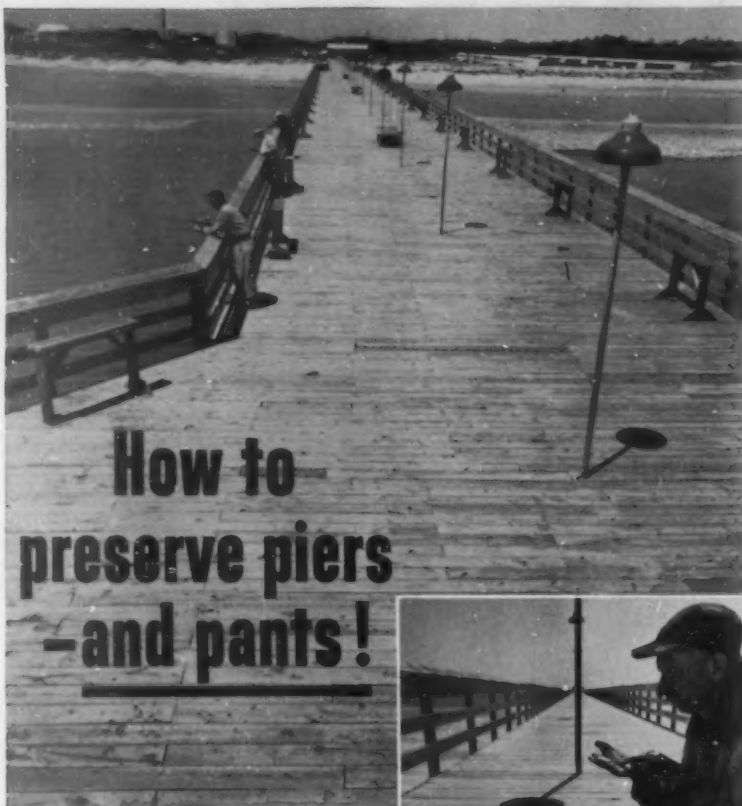
McBEE



KEYSORT

Punched-card accounting for any business

Manufactured exclusively by The McBee Company, Athens, Ohio • Division of Royal McBee Corporation
Offices in principal cities • In Canada: The McBee Company, Ltd., 179 Bartley Drive, Toronto 16, Ontario



This fishing pier is at the Isle of Palms, near Charleston, S. C. All decking and handrails are made of Wolmanized lumber, which is chemically treated to resist rot, decay and termites. This lumber is not corrosive to metal fasteners used in constructing piers. Lumber was supplied by Cox Wood Preserving Co., Orangeburg, S. C.

The piling, supporting the pier, is pressure-treated with coal-tar creosote—the only preservative that will resist marine borer attack.



Fishing piers are always exposed to the elements. Rain and spray pave the way to decay. A pier's life is a short one . . . unless it is properly protected.

And this pier is properly protected. All decking and handrails are made of Wolmanized® lumber—the special kind of lumber that is chemically treated to prevent decay.

How do fishermen feel about a pier

like this? They're all for it. They can kneel or sit on the decking, or lean over the rails, and the clean, odorless Wolmanized lumber won't harm their clothes.

Send for free booklet. It tells why Wolmanized lumber is so widely used in both light and heavy construction. Koppers Company, Inc., Wolman Preservative Department, Pittsburgh 19, Pennsylvania.

SEND FOR FREE BOOKLET

Koppers Company, Inc., Wolman Preservative Dept.
1301-J Koppers Building, Pittsburgh 19, Pa.

Send me a free copy of your illustrated booklet on Wolmanized lumber.

Name

Company

Address

City Zone State



Wolmanized® LUMBER

CLEAN • ODORLESS • PAINTABLE

tribution to management planning through the survey of capital spending [BW—May 19 '56, p23—Planned for a Long Climb]. The new addition of business plans for research and the interpretation of research and development in terms of industrial creation of growth and change will be a far-reaching influence on management activity. No publication has treated it as effectively as you do in your recent article. . . .

Our firm, too, is concerned with contributing to industrial planning and development. In the past two years we have added a fourth group of services in the research management area. . . .

WILLIAM E. HILL
MANAGEMENT CONSULTANT
NEW YORK, N. Y.

Another Solution

Dear Sir:

I've only now been reading your prized January 21st issue and noted One Farmer's Solution [BW—Jan. 21 '56, p10—Readers Report].

Displaced acres are rough on vegetable growers: In South Carolina [in January, I had] a talk with the live-wire manager of the Charleston Production Credit Assn. that revealed whenever the cotton-tobacco counties get government orders to cut acreage, Mr. Vegetable Credit [those banks doing business with vegetable farmers] has to move out of the two island counties within a few weeks.

That [One Farmer's Solution] is an over-simplification of the problem is made obvious by the very excellent review of Schoeffler's "The Failure of Economics." Prof. Lowe [BW—Jan. 21 '56, p90] is right; businessmen will always have to rely on "good judgment, experience, and a sixth sense." This sixth sense, however, is a social function of "Mr. Credit"—which periodically goes awry. . . .

ALDEN POTTER

BETHESDA, MD.

An Engineer Speaks

Dear Sir:

The wails of management over the scarcity of engineers is "music" to one engineer whose "time is about up" and who has profited professionally, "not much money, but a lot of fun."

A general manager (a businessman) once offered to transfer the engineer to the sales force. When the engineer demurred, the manager said, "Those are the boys we pay the money." The engineer,

When there's a turnpike being built you'll see Gradalls® on the job!

GRADALL
has proved itself
on all these
turnpikes

GARDEN STATE PARKWAY
INDIANA TURNPIKE
KANSAS TURNPIKE
MAINE TURNPIKE
MASSACHUSETTS TURNPIKE
NEW HAMPSHIRE TURNPIKE
NEW JERSEY TURNPIKE
NEW YORK THRUWAY
OHIO TURNPIKE
PENNSYLVANIA TURNPIKE
TURNER TURNPIKE
WEST VIRGINIA TURNPIKE



WHY are cost-conscious contractors becoming so "sold" on Gradalls for turnpike work?

No other machine does so many *different* jobs so well—often work no other machine can touch. You'll see a Gradall digging out rock one day, and carefully spreading top soil the next. It's a real production machine for such jobs as trenching for drainage tile. But it is equally profitable on a "hand-finishing" job where it replaces a whole crew of hand laborers.

Because of its many uses you'll keep a Gradall busy from start to finish of any contract. And from one job it's ready to speed to the next, carrying its own quickly interchangeable attachments for any work ahead. On the West Virginia Turnpike Gradalls averaged over 60 on-the-job hours per week for a full year! An Ohio Turnpike Superintendent reports, "I've kept two Gradalls going full time for 1½ years on this section. They do everything you recommend them to do."

Take a look at this partial list of turnpike jobs now being handled by Gradall. Then see one in action. You'll see how you can *boost profits* on your next contract—with a Gradall!

© Reg. U. S. Pat. Off.

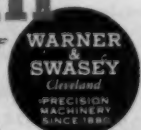
**Gradall cuts costs
on all these turnpike jobs!**

- Digging gutter and drainage ditches
- Structure excavations—headwall, stilling basins, etc
- Trenching for under drain and large drains
- Placing concrete culvert and drainage pipe
- Backfilling
- Work under bridges and around other structures
- Sloping and grading
- Riprapping
- "Hand finish" jobs
- Loading out and spreading top soil
- Pulling concrete forms
- Loading boulders



Gradall
DIVISION OF

Distributors in over
75 principal cities in the
United States and Canada



YOU CAN DO IT BETTER, FASTER, FOR LESS WITH A GRADALL



Wide World Photo

Warehouse of electrical supplies lands with Operation Deep Freeze

To build four bases in the Antarctic—two main ones and a satellite for each—the task force of Operation Deep Freeze required a fully stocked warehouse of electrical materials for lighting, heating and ventilation.

Along with other suppliers of varying items, Graybar was called upon for huge quantities of electrical material from their New Haven warehouse. With Bill Hogan, Graybar Salesman, acting as coordinator, our New Haven office staff gave a big assist for source inspection and export packing. A color coding marking system was devised to keep exact quantities of material for each base separated. For several weeks the warehouse looked like a paint shop!

In the midst of this effort came a copper shortage followed by the disastrous New England floods. But with teamwork on the part of the Navy and everyone concerned, Graybar delivered right on schedule.

Operation Deep Freeze is a tremendous undertaking. Graybar's role is cited simply to show the scope of our services. When you call on Graybar, you have at your command the nationwide facilities of a single, all-inclusive source of everything electrical. More than 100,000 electrical items for wiring, lighting, communication, ventilation and power are available from a network of Graybar offices and warehouses in over 130 principal cities. And in every electrical field there are Graybar Specialists ready to serve you whenever you require their expert assistance. We invite your inquiries—both large and small.

637-26

GRAYBAR ELECTRIC COMPANY, INC.
420 Lexington Avenue, New York 17, N. Y.

CALL GRAYBAR FIRST FOR...



young enough to resent that, and naive enough to imagine logic could appeal to the businessman, queried, "What could the wonder boys sell if the engineers did not design and produce it?"

Young men of engineer caliber now take a dim view of this inequity and offer their services elsewhere, and management has a long up-hill drag to lure them back again. Also it takes eight years to train an engineer, whereas a wonder boy is a salesman by nature. . . . This lays the shortage of engineers squarely upon those responsible, and names the cause, up to now discreetly passed over.

HARLAN HONN

RESEARCH ENGINEER
SAN FRANCISCO, CALIF.

The Lecture Platform

Dear Sir:

Ralph J. Cordiner's lectures [BW—May 12 '56, p68—Big Business Explains Itself on the Lecture Platform] can be summed up in one sentence: The promotion of efficiency—in the widest sense of the term.

Mr. Cordiner, as reported, "also posed some difficult business questions with broad political and social overtones. . . . What are the ultimate implications of efficiency?" Neither Mr. Cordiner nor anyone else, to my knowledge, spelled out an affirmative, conceptualized answer.

In ultimate analysis, the short and long range implications of progressively increasing efficiency are a progressively increasing unexplored frontier of potentially moral, amoral, and/or unmoral leisure, synonymous with parasitism. Man is on the threshold of a new era of pioneering. "The ultimate implications of efficiency" . . . apply to every sphere of life. We must learn "efficiency" from the grass-roots.

For the first time in history, the trends of all basic factors of civilization . . . challenge man to pioneer . . . to harness and channel leisure. Here is the key to the answer to "some difficult business questions." . . .

PHILIP WEISS

ST. LOUIS, MO.

Letters should be addressed to Readers Report Editor,
BUSINESS WEEK, 330 West 42nd
Street, New York 36, N. Y.

Atlas took the fly out of the ointment

Sunburn preparations and other ointments . . . made washable by Atlas emulsifiers . . . win praise from laundries of hospitals and resorts



MEDICATED OINTMENTS often leave oily or greasy stains on linens and clothing. Because the oils and waxes in the ointment won't mix with water, these stains can't be washed out.

Nowadays, however, any ointment can easily be made washable. Leading pharmaceutical manufacturers got together with Atlas and worked out the answer to this problem. Through use of properly selected Atlas emulsifiers in ointments, even the traditional "waterless" ointments, usually the most difficult to remove from skin or textiles, gain washability. Hotel owners save on linens. Vacationers save their clothes, and save their tender, sun-scorched skin, too—ointment now rinses right off in the shower. Ointment manufacturers are happy with the increased sales of their products.

All of which points up another example of how Atlas organic chemicals are bringing a sunnier outlook to manufacturers in many kinds of industries. Why not enlist Atlas technical assistance to take the "bugs" out of your product or processing operation? Atlas Powder Company, Wilmington 99, Delaware.

 **ATLAS**
POWDER COMPANY
SORBITOL, POLYESTER RESINS
EMULSIFIERS, DETERGENTS
EXPLOSIVES, ACTIVATED CARBONS

STEEL BUYERS GUIDE to Ryerson Products and Services

You can draw on your nearby Ryerson plant for an almost endless number of products and services—and the more you concentrate your purchases at one source, the more you save. Ryerson

products not pictured here include: Re-bars, expanded metal, grating, plastic pipe, machinery and tools, etc. See your Ryerson catalog for complete list and write for descriptive literature.



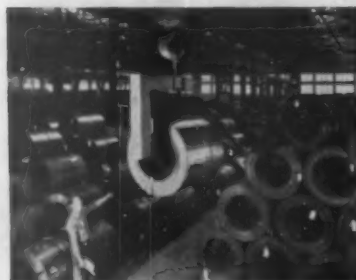
BARs—The most complete range of types, shapes and sizes as well as the largest tonnage.



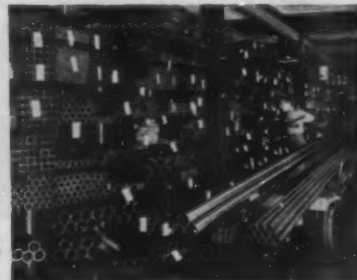
STRUCTURALS — I-beams, H-beams, channels, angles, tees and zees—all to ASTM spec. A-7.



PLATES—14 types including special low carbon plates for forming and welding, leaded E-Z-Cut, etc.



SHEETS & STRIP—More than 20 different types in pattern sizes, cut-to-order sizes, strip coils, etc.



TUBING—Seamless and welded mechanical tubing, fluid power tubing, structural and boiler tubes, etc.



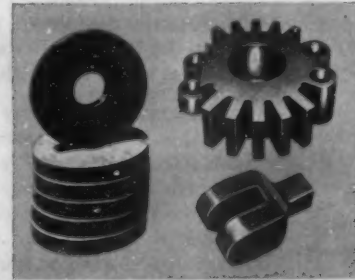
C. F. BARs—Cold finished steel for every use: screw steel, Ledloy, accuracy stock, machinery steel, shafting, etc.



ALLOYS—Every type including leaded alloys for fastest machining, all performance-proved by tests.



STAINLESS—Allegheny stainless in over 2,221 sizes, shapes, types, finishes: sheets, plates, bars, pipe, etc.



FLAME CUTTING—Almost any shape quickly cut from strong rolled steel—one or hundreds all alike.

RYERSON STEEL

JOSEPH T. RYERSON & SON, INC. PLANTS AT: NEW YORK • BOSTON • WALLINGFORD, CONN. • PHILADELPHIA • CHARLOTTE, N. C. • CINCINNATI
CLEVELAND • DETROIT • PITTSBURGH • BUFFALO • CHICAGO • MILWAUKEE • ST. LOUIS • LOS ANGELES • SAN FRANCISCO • SPOKANE • SEATTLE

BUSINESS OUTLOOK

BUSINESS WEEK

JUNE 2, 1956



Now everyone is talking inventories (page 26). And it's quite a switch, for most of the concern is about too much, not too little.

For a long while, it was the rule to insist that there were no steel inventories—or copper—anywhere. Bank loans to metalworking companies belied this. So did the slump in autos and certain other lines.

Suddenly the mood has turned much less confident.

Inventories that weigh a little heavily today may seem a lot lighter before wage talks in steel (page 46) and copper end.

A quick settlement in steel would, of course, bring on a test.

Only recently has the fact been accepted that many steel products are held in comfortable quantity. Without a strike, factories might eat off the shelf; demand on the steel mills would taper off.

But a strike would quickly change all that. Hence some observers now believe that "steel can afford to take a strike."

Everyone figured, two months ago, that insatiable demand for steel would bring a quick wage settlement—and a big price boost.

But there no longer seems to be any such blueprint.

The union demands this week were tough—but it remains to be seen how tough the pursuit of the demands will be. And, if the business picture softens labor's attitude, it will stiffen management's.

Steel mills have been obliged to keep output as close as possible to capacity up to now (and they're sold out through June). Demands of a high-gear economy plus squirreling away of a little steel against the promised price rise have seen to that.

But output already has been dented by labor trouble in the Birmingham area. And a tugboat walkout threatens Lake ore shipments.

Nevertheless, production for the half year (which ends at the wage deadline date) seems sure to top 61-million tons.

How much of steel mills' record outpouring will rest in customers' inventories, come midyear, is one of the unanswerable questions.

The growing certainty, however, is that enough will rest there to cast increasing doubt on the tranquility of wage negotiations.

You can guess, from the drop in prices of steelmaking scrap, that mill men must be thinking in terms of either a strike or a fairly sharp drop in their operating rate in the third quarter.

Scrap has gone off \$6 to \$8 a ton in a month. The decline was continuing this week with another markdown in Chicago.

Declining exports may have touched off the drop, but it is very doubtful that this factor alone accounts for the whole thing.

Copper's contract bargaining will open against a clearer—but perhaps more trying—set of economic conditions than the steel talks.

• Demand for the red metal has tumbled with London's market break. The price abroad, by early this week, had fallen fully 30%.

BUSINESS OUTLOOK (Continued)

BUSINESS WEEK

JUNE 2, 1956

• Brass mills' copper stocks are the biggest in about eight years.

• Premium prices long in effect here on copper scrap and custom smelter output now have turned to substantial discounts when compared to the 46¢ a lb. the big producers have been asking.

Output of leading U. S. copper interests is sold out at 46¢ through the end of this quarter. But it is unlikely that such a high price will appear on contracts to be written from now on.

The producers themselves went up to 46¢ reluctantly (when they could have pushed the price much higher). And they aren't anxious to see the metal stay so dear.

They frankly fear the inroads aluminum may be making.

Reduced demand and a distinctly soft price structure are not the backdrop the union had visualized for this wage bargaining.

The stage has been set for harsh demands, bulwarked by record profits of the producers. The leaders of the Mine, Mill & Smelter Workers, ousted from CIO, presumably were out to show what they could do.

The question is: Can they backtrack now that things have changed?

—•—
"Slowing down" seems increasingly common these days, but in many industries it's just a drop from the dead run to a comfortable trot. (The trouble, perhaps, is more that it brings fears of worse to come.)

So it is with shoes which apparently have fallen back in the last few weeks. Now output is only about matching the figures for this same time in record 1955 instead of posting 10% and 15% gains.

Some of the earlier demand was in anticipation of a price rise.

Producers of leather shoes may shortly be getting the advantage of lower raw material prices. Hides, after remaining strong all year, suddenly turned soft as orders for shoes tapered off.

—•—
Imports from Japan are coming under still sharper fire as the competition in cotton textiles gets hotter.

Mills here contend that each fabric Japan starts pushing forces makers in this country to shift their looms to other constructions. And that, in turn, sets up new competitive squeezes.

—•—
Furniture makers continue to show a good gain in bookings over a year ago, but the margin is shrinking.

Seidman & Seidman, accountants for the industry, report new orders booked by manufacturers in the first four months were 14% ahead of the year before, but that April's gain was a mere 8%.

—•—
Interest in FHA-guaranteed mortgages continues to lag.

Applications in April fell more than 10% below March and ran nearly a third behind April of last year.

As with VA mortgages (BW—May19'56,p20), a major reason doubtless is lenders' disinclination to accept the FHA interest rate.

Long awaited...

On the next two pages appears an announcement of a new plastic—a molding material with a unique combination of properties that answers a long-felt need of industry.

You may be among those who have long wished that such a material existed. Or you may be stimulated by this remarkable new material to think along entirely new lines.

Now, here it is...

The logo consists of the word "CYANAMID" in a bold, sans-serif font, enclosed within a horizontal oval border.

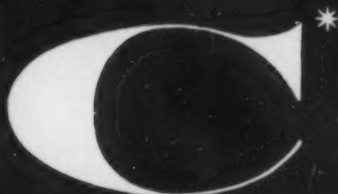
CYANAMID

C

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M





**Methyl -
Styrene
Molding
Compounds**

*Trademark

Announcing New Thermoplastic Molding Compounds...CYMAC

—based on Methylstyrene Monomer

NOW AVAILABLE—two compounds so heat resistant that products molded from them show no distortion after repeated, extended immersion in boiling water.

1. CYMAC 400 Polymethylstyrene—offers unusual heat resistance *plus* all the desirable properties of polystyrene, including excellent electrical properties, clarity, luster, and unlimited range of transparent and opaque colors.

2. CYMAC 201 Methylstyrene-Acrylonitrile Copolymer—offers better toughness, chemical and craze resistance than CYMAC 400—*plus* heat resistance, clarity,

luster, and wide color range.

Both of these new molding compounds provide the added value of remarkable heat resistance at costs no greater than competitive materials.

These new methylstyrene thermoplastics are made possible by revolutionary new processes developed by Cyanamid. They will help you upgrade existing molded products, and find new applications in consumer and industrial fields.

Turn opportunity into reality NOW. Write or call today for complete information and samples.

CYANAMID

AMERICAN CYANAMID COMPANY

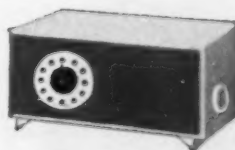
PLASTICS AND RESINS DIVISION

30 ROCKEFELLER PLAZA, NEW YORK 20, N. Y.

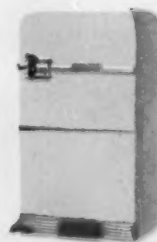
In Canada: North American Cyanamid Limited, Toronto and Montreal



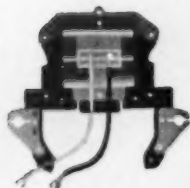
For automotive parts



For radio cabinets



For refrigerator parts



For electrical parts



For business machine
housings and parts



For pen barrels



For fan blades



For battery cases



For wall tiles

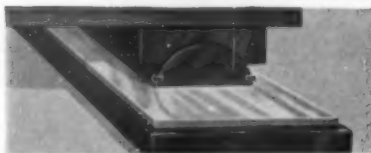
... and hundreds of other products

CYMAC thermoplastics will be featured in Cyanamid's exhibit at the 7th National Plastics Exposition, June 11-15, which will be held in the New York City Coliseum.



The New York State Thruway curves gracefully across the Hudson River just north of New York City on the new 16,000-foot Tappan Zee Bridge.

The roadway over Tappan Zee moves on Anaconda Bronze



Arrows show direction of movement, as free end of approach roadway section slides on 8" x 17" phosphor bronze bridge plates.

THE PROBLEM: A bridge roadway is in continuous motion. The sun's heat makes it expand. When the temperature drops, it shrinks. The movement is small and slow, but an important factor in bridge design. For economical construction, the 8000-foot-long western approach to the main span of the New York State Thruway Authority Tappan Zee Bridge, for example, is divided into 50-foot sections. One

end of each section is fixed; the other slides freely on bearing plates.

THE SOLUTION: Cast bronze bridge plates sometimes crack, causing considerable difficulty in replacement. To meet this problem, Anaconda's American Brass Company developed a rolled bridge plate of wrought phosphor bronze — a copper alloy strong enough to carry the weight, tough enough to take the wear, and highly resistant to corrosion. In building this great new bridge, The American Bridge Division of U. S. Steel used thousands of these Anaconda Phosphor Bronze Bridge Plates under roadways.

THE FUTURE: The American Brass Company is constantly improving alloys. A recent development is Dura-flex* — a new, fine-grain phosphor

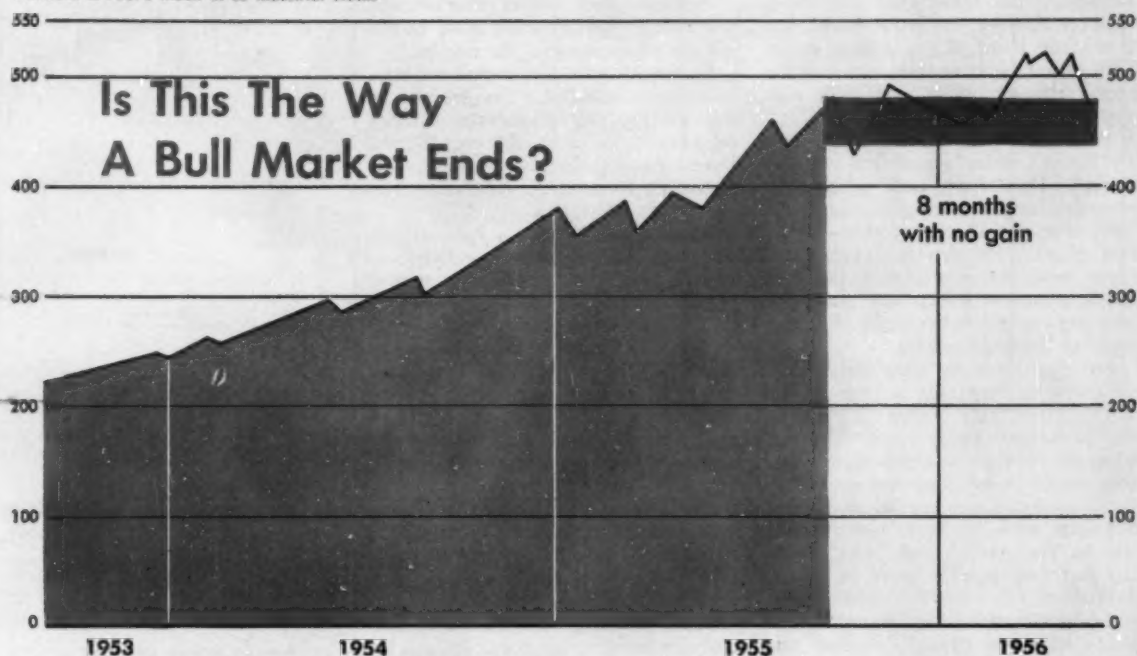
bronze with 30 percent greater endurance limit — that is helping industry produce springs and electrical contacts that work better, last longer.

Anaconda's other fabricating company, Anaconda Wire & Cable Company, is blazing new trails in the field of electrical conductors and their insulations.

Whether you need wire or cable of copper or aluminum — or a special alloy or shape in copper, brass, or bronze — get in touch with the Man from Anaconda for help in practical solutions to your metal problems. The Anaconda Company, 25 Broadway, New York 4, N. Y. *Trade Mark 66248

ANACONDA®

Standard & Poor's index of 50 industrial stocks



Data: Standard & Poor's Corp.

Market With No Confidence

This week, the question posed in the chart above was crossing more and more businessmen's minds: Is the great bull market of 1953-56 through?

Many were concerned in their capacity as investors and traders in this richest of all markets; others were eying the stock market in its traditional role as a harbinger of things to come. Either way, this week's probings into the market's state of health couldn't help being slightly disquieting.

• **Worst Month**—May was the stock market's worst month in the post-war period. It was worse than any 30-day period in the market slides of 1946 or 1949. It was worse than any similar span in 1953. Last September's "heart attack" break, though sharper, wasn't so grueling in points lost or percentages pared off stock averages and indexes.

When the stock market snapped out of its lethargy in mid-February and rode jauntily to a new record high (521 on Standard & Poor's 50 industrials), everything looked wonderful. The shat-

tering after-effects of the heart attack break were forgotten, as was the lack of spark for a yearend rally.

But since that bull market high in early April, the market has declined 10.3%—around 54 points. The decline has been steady, with no frantic debacles wrenching huge gouts of paper profits from the averages; the biggest daily decline has been 8.7 points, compared with 33 points on Sept. 26. The fall has been consistent: 26 out of the 36 trading sessions up to early this week showed declines. It has been widespread: In April, 15 out of 21 days brought more declines than advances, and in May, 14 out of 21 days brought more declines than advances.

• **Treadmill**—Early this week, perhaps the most disheartening fact of all was plain. In just about eight months, since the highs just before the President's heart attack, the market has gyrated in a range of nearly 100 points—and gotten nowhere.

In fact, early this week, it stood about 3.1% below those September

highs—and only 2.6% above this year's lows. Stock prices dropped like a rock through the much talked-of support level of 475-490 and neared the next such level—in a 445-460 range.

I. Institutionals

Bull markets have run out of gas before in much this way. That doesn't necessarily mean this one will perform likewise; there have been some big changes wrought in the character of the stock market since 1946, which is the period many Wall Streeters are using as a criterion for today.

Most important of these changes, perhaps, is the dominant role played in today's market by cash-heavy institutions.

• **Force Either Way**—In the last "profile" of the market painted by the New York Stock Exchange, institutions were found to account for about 16% of all trading. Most Streeters would bet that, early this year, they accounted for 25% to 30% of all trading and were the

most powerful force in the February-April drive to new highs.

However, the institutions can exert just as much force on the market by staying out of it as when they are participating. And they have been staying out for the past six weeks.

"Our buying has been largely to replace recently soldout items in our portfolio," says one investment trust head, "and we've done very little in the way of new purchases. We're holding nearly 12% of our assets in cash, which is the largest amount we've ever held that way."

• **Bargain-Hunting**—These institutions haven't been scared out of the market. They have cash pouring in every day and must invest it somewhere. They shop for the best return—or the best chance for capital appreciation. Right now, the appreciation possibilities in common stocks look uncertain, and they can get better yields, in many cases, in the bond market.

But now there are signs that the institutions are beginning to shop for the bargains they have helped to create in the prolonged slump. Last Monday, when the averages slumped again, 760,000 shares (more than one-quarter of the day's total) were traded in the last half-hour, with the ticker tape running late on the upside. And Tuesday saw the first firm upward move in over a month.

"Evidently some big buyers figured prices were low enough," opined one Streeter.

"We've had more indications of buying interest in the past week than at any time in the past six months," said another.

• **Shakeout Goes On**—While it was considered a sign of strength that volume didn't pick up appreciably at any point in the long decline, there had been definite signs last week that selling was getting up some steam. And in a sense, the volume figures for Big Board trading didn't tell the whole story; big blocks of blue chips—du Pont and Standard Oil (N.J.)—were being unloaded last week in off-Board secondary offerings.

When the stock market smashed on the news of Pres. Eisenhower's thrombosis, Wall Streeters probed into the anatomy of the market and arrived at the conclusion that it had been too high, that a shakeout was needed to pull stock prices back into line with earnings and dividends. Some of the same reasoning is being used today.

"Investors should welcome the recent slump, because it gives the market a badly needed breathing spell in which earnings and dividends can catch up," was the way one brokerage firm partner phrased it.

Actually the market today would seem to be in better shape than it was

last September. Price-earnings ratios on S&P's 50 industrials stood at 13.33 to 1 back in September. Last week, the same stocks were selling at only 12.22 times earnings. Likewise, yields had improved from 3.52% to 4.10%.

II. Indexes

As usual, stock market price averages and indexes haven't come close to telling the whole story of the decline.

So far this year, the market has been mercilessly selective. No trader can rely on the general industry outlook on sales or earnings, for even in the fastest moving industries many companies are languishing. You can't even rely on time-tested rules.

• **Mixed Friday**—Take a look at one day—May 25—to see how selectivity can destroy the firmest-looking market logic.

That day, the averages were going all different ways—Dow-Jones off a point, S&P's up slightly. New York Times up more than a point. Not a bad-looking day, as recent days have gone. But 522 issues sold lower at the end of the day, with only 390 advancing.

The real clue to the selectivity of that day's market, however, could be found in the list of new highs and new lows. New highs were easy to list—there were only two: Houston Oil and Curtis Publishing. But new lows presented a bewildering array.

As an investor, you might have figured some time ago that steels looked strong and might have bought some. But if one of them was Acme Steel, you're disappointed: It was among the new lows. Military expenditures are high, with emphasis on guided missiles; buy some aircrafts, you may have said. But Bell Aircraft, Grumman, Douglas, and Bendix Aviation were all among the new lows and, except Douglas, all selling below their September, 1955, high.

Maybe you went defensive after the heart attack, loaded up on utilities. Commonwealth Edison, Consolidated Edison, Baltimore Gas & Electric, and Boston Edison were all in the new-lows list, all selling from 6% to 16% below their highs of last September. Blue chips such as du Pont, American Can, and Coca-Cola could also be found among the new lows list.

All in all, it's a picture to confuse the most experienced investor.

• **Street View**—Most Streeters would probably not bet that the bull market is dead. But few would bet that new highs will be scored again this year. "It all depends on the economic situation—and on the election."

If the market mirrors business confidence, as most assume, then that confidence is definitely shaken.

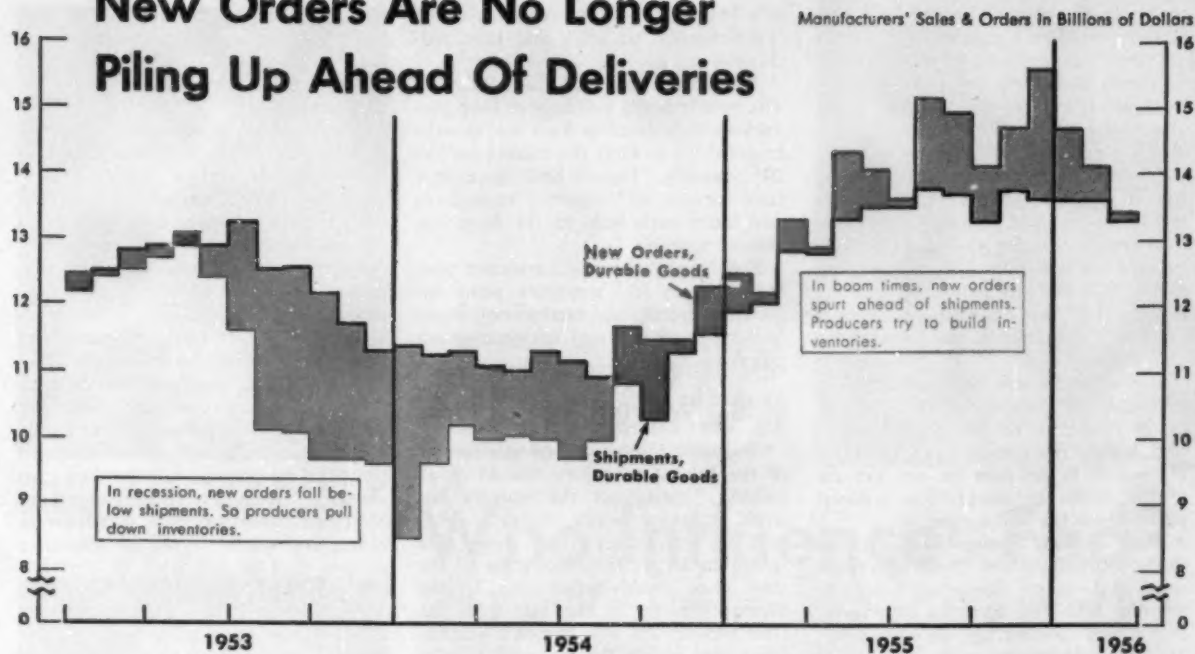
SITUATION

WORRY

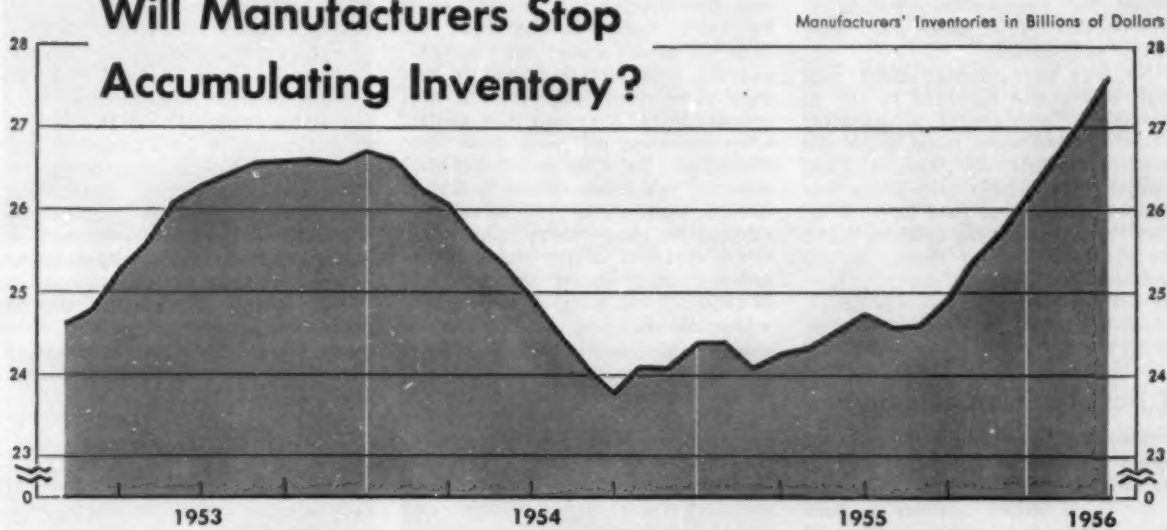
Why

Nobody needs to be told that business is still moving along the same high plateau it reached eight months ago. And the recent McGraw-Hill capital spending survey (BW-May 19'56, p23) gives powerful evidence that business is staying basically optimistic for the long haul.

New Orders Are No Longer Piling Up Ahead Of Deliveries



Will Manufacturers Stop Accumulating Inventory?



Investor Confidence Droops

Yet, beneath that optimism, you can feel a growing wave of caution and uncertainty about the short-term outlook. The stock market's performance is a reflection—or perhaps an exaggeration—of this change in business sentiment. But there's no doubt that there has been a weakening in business con-

fidence—and that this weakening is based on real economic developments.

I. The Inventory Trap

For one thing, the flow of new orders for the nation's factories is falling off (charts). In the past, this has

usually been the signal for cutbacks in inventories—and such cutbacks were the primary cause of both the postwar recessions.

Though production has stopped growing, it's been running ahead of sales; so inventories have been growing during the first part of this year—at an an-

nual rate of about \$4-billion. This inventory buildup has been one of the economy's supports so far. It may not be much longer.

• **How It's Set**—The tough thing about inventories is that you never know they're too large until it's too late. When new orders are flooding in on a manufacturer, he struggles manfully to get enough materials together to handle the sure business he sees on his order books. He complains that he just can't get enough, insists that his inventories are in "normal" relationship to the business he's doing.

But when he sees new orders failing to climb, or starting to slip, he suddenly discovers he has more money tied up in inventories than he likes. He wants to be sure he can get rid of the stocks he already has, without piling them up still higher.

• **How It May Spring**—The statistics show justification for some apprehension that many businesses may be running into that situation right now. Just a few months ago—in December, 1955—manufacturers' new orders for durable goods were up to \$15.6-billion. That month manufacturers were shipping out only \$13.6-billion worth of goods to their customers. But in March of this year, manufacturers' new orders for durables had slipped to \$13.4-billion—and shipments were worth \$13.3-billion.

So sales were running about even with orders, and the need to add to inventories was clearly disappearing. Many manufacturers could sense this important shift in the business weather. They might keep saying that business was just as good as ever—but they knew that the big uplifting factor for the future wasn't there. As one Syracuse manufacturer put it, "Now we have all the business we can handle—but before we had more than we could handle."

II. How Trouble Could Spread

This Syracuse complaint may not sound particularly disastrous. But in its broader effects on the U.S. economy, it is serious. When business ceases adding to inventories at the old rate—a move that precedes any actual working down of inventories—cuts in total production must follow. This subtracts from total employment, total income, and total spending. And cuts in those places make inventories look more excessive than ever. When cuts in inventories do start, production takes a still stiffer jolt.

• **Limited Trouble**—So far, the U.S. economy as a whole has not really entered the downphase of an inventory cycle, and no one can be at all sure that it will. The trouble is still limited

to a few sectors of the economy—most conspicuously, to autos and farm machinery.

Auto stocks remain at about 900,000. The auto industry will have to keep production well reined-in for a few months longer if it's to clear the market for the 1957 models. There's little hope that farm income will improve enough to give much early help to the farm machinery makers.

But a few other industries are now beginning to feel inventory pains—for instance, some big consumers' items like television sets and refrigerators are piling up fast.

III. Big Worries: Steel, Homes

And only a short way ahead lies one of the biggest inventory worries of all—steel. Throughout the country last week, **BUSINESS WEEK** reporters were told by steel-users that they were struggling to get their hands on all the steel they could—before the United Steelworkers go to the mat with the steel industry in this month's negotiations, and before the expected hike in the price of steel.

• **Steel's Prospect**—Nobody knows how much steel the manufacturers have squirreled away. But it's a safe bet—and no steel customer denies this—that they have enough to carry them for many weeks beyond June 30. Whether there's a steel strike or not—and the odds that there will be one seem to be rising (page 46)—the steel industry knows it faces a third quarter when customers will work down their inventories. So, strike or not, the steel operating rate seems certain to decline markedly—perhaps to 85% of capacity—during the third quarter. This, then, means that one of the strongest sustaining factors during the first half of 1956 will lose some of its potency.

• **Oversold**—Business confidence is shaken further by the failure of housing construction to rise above a seasonally adjusted rate of 1.1-million starts. Tight money, resulting from the Federal Reserve's stiff policy of restraint, rates a lot of the responsibility for this—as it does for the flagging sales of autos and some other consumer durables. But beyond that there's a sneaking suspicion in some minds that the market for houses, and cars, and TV sets may have been oversold, that the public will pause awhile to digest the stuff it has already gone in hock to buy.

IV. How It's Pinching

Around the country, most businessmen don't seem particularly ruffled by the soft spots in the economy, or by the downtrend in the stock market. They generally insist they are maintaining stable inventories and stable or

growing work forces. Of course, outfits whose business depends largely on autos, or farmers, or housing are in different, and more immediately exposed, spots.

For instance, a major tire company in Akron is peeling off inventory and will call in its workers only three days this week. A lock manufacturer in San Francisco says that because building is off his orders are down, and he will have to cut his output and inventories. A lumber broker in Seattle showed a **BUSINESS WEEK** reporter a telegram from one of his big customers—who owns 40 lumber yards—saying that slow business, especially in farming areas, is leaving unusually large inventories. This customer plans to shift his stocks among his yards to reduce the total inventories he's holding. An electrical machinery manufacturer in St. Louis complains of a slowdown in orders for smaller types of appliance motors, says he will have to start layoffs next week.

• **Slow Payers**—Some businessmen are catching the unfavorable wind in the form of a perceptible slowing down in their collections in accounts. You find manufacturers noting with surprise—and discomfort—the increasing number of customers declining to take advantage of discounts for advance payments of their bills.

Smaller businesses complain that the pace is getting hotter; some fear it is going to be killing. A steel fabricator says his costs are always being raised by his big suppliers, but that in the present market he can't pass these cost hikes along to his own customers. Plenty of other small businessmen agree with him, and some of them are trying to avoid this cost squeeze by having more of their output manufactured for them abroad.

The coming third-quarter slip in production appears to be the main reason for the turnabout in prices of scrap steel, copper, and other industrial raw materials.

V. Fourth-Quarter Hopes

Despite the strains that threaten to slow down business in the next quarter, there has been no real swing to deep pessimism. A large part of the business community feels that after the ferocious pace of business last year, a short slow-down is inevitable, that by the fourth quarter business should be hitting its stride again.

Nevertheless some businessmen are worried that if a third-quarter downtrend goes too far, it might not be so easy for the economy to turn around in so short a time. Worries like these may not dominate the U.S. business scene, but they are certainly big factors in the stock market's decline.



MARTIN, the Fed's boss, so far won't talk specifically about consultations on policy.

Rep. Patman (right) is calling hearings to find out how strongly Administration officials opposed the Fed's April hike in the discount rate. He wants to know...



Who Influences Fed?



HUMPHREY publicly has disapproved Martin's policy, but is silent on private role.

Rep. Wright Patman, a Texas Democrat who seldom likes anything either the Federal Reserve Board or the Eisenhower Administration does about money and credit, this week planned to summon all of his old opponents before his subcommittee.

• **Initial Rebuff**—Patman wants to know what Federal Reserve and Administration officials said to each other before the Fed approved a tightening of credit in April. He tried to find out last month by writing letters to three cabinet members, the chairman of the Council of Economic Advisers, and Federal Reserve Board Chmn. William McC. Martin, Jr. They rebuffed him.

Now Patman's counting on getting at least Martin and Treasury Secy. George M. Humphrey to testify—in public, if possible. Humphrey didn't agree with Martin when the Fed raised

the discount rate in April and Patman stoutly maintains Congress has a right to know the details. He wants his Subcommittee on Economic Policy of the Joint Congressional Committee on the Economic Report to be the forum.

• **Other Inquiries**—In the meantime, other inquiries into money and credit were competing for attention in Washington:

• A House Government Operations Subcommittee headed by Rep. William L. Dawson (D-Ill.) asked Secy. Humphrey to testify this week on the role played by private bankers and insurance men in discussions of Treasury Dept. financing policies. Dawson also wants to hear from four businessmen who represent national organizations interested in government securities and the federal debt. These men are: Emil J. Pattberg, of First Boston Corp. and Investment Bankers' Assn.; Robert V. Fleming, Briggs National Bank and American Bankers Assn.; Carrol M. Shanks, Prudential Insurance Co. and American Life Convention; and William H. Harder, Buffalo Savings Bank.

Dawson wants these men to tell what their recommendations to the Treasury Dept. have been regarding the issuance of U.S. securities, and whether the Treasury accepted or rejected their counsel. This study is a part of a broad inquiry into the use of advisory groups and consultants in all government departments, and is not primarily aimed at Treasury financing policies.

• A broad study of the entire credit system was proposed last week by Allan Sproul, retiring president of the New York District Federal Reserve Bank. Sproul suggested a Presidential commission to study the role of all types of credit institutions, with special reference to whether small business suffers



BURNS, Presidential economic adviser, says he frequently consults with Martin.



SPROUL, banking official, asks special study on role of credit institutions.

unduly in periods of credit stringency. Such a study is a real possibility next year, regardless of the outcome of the November election.

Patman's hearing will not pit Martin against Humphrey in a clash over the economic outlook, although this is what the two officials disagree on. Martin thinks inflation is the chief threat and Humphrey opposes any further tightening of credit until the full meaning of soft spots such as autos and housing can be assessed. Democrats may hold hearings on this broad question closer to Election Day.

Right now, what Patman and his chief supporter on the subcommittee, Sen. Joseph C. O'Mahoney (D-Wyo.) want to know is how strongly Humphrey and other members of the Administration opposed Martin before the discount rate was increased. They express concern over the "forces, governmental as well as other, to which the board is subjected in the performance of its duties." They see the hearing as an inquiry into the "nature of the influence brought to bear" on the Fed—an agency that exercises powers delegated to it by Congress.

• **Specific Queries**—Here's what Patman will ask Martin, for example:

- Was the decision to raise the discount rate made contrary to the advice of such officials as Humphrey and Arthur Burns, chairman of the President's Council of Economic Advisers?

- What communication, by word of mouth or by letter, did Federal Reserve officials have with Humphrey and Burns prior to the decision?

- After the decision, did members of the cabinet direct any criticism of the Fed's action to Martin or other members of the Board of Governors?

To similar questions posed by letter, Martin merely said that the Fed and the Treasury work as partners, that there is constant consultation, and that differences of judgment are bound to occur at times. Patman interpreted this reply as a refusal on Martin's part to disclose information that Congress has a right to have as part of its constitutional authority over money. He had expected a full and detailed reply from Martin.

Patman probably did not expect full replies from members of the Administration, but was pleased with what some of them said, just the same. Burns, for example, withheld details about when and how he communicated with Martin, but stressed that consultation occurs frequently and added that he doubted the timeliness of the Fed's decision.

Commerce Secy. Sinclair Weeks and Labor Secy. James P. Mitchell, who publicly criticized the Fed, denied having any communication with the Reserve Board.

• **Humphrey's Role**—Humphrey side-

stepped Patman's questions about how and when he had gotten in touch with Martin, but granted that "we often have differences of judgment arising from varying appraisals of the timing and effect of economic trends." Patman will make Humphrey's role before and after the decision a particular target of his investigation. Humphrey has discussed his differences with Martin in a hearing before the Senate Finance Committee and in a speech before the National Press Club in Washington.

Patman and O'Mahoney will argue that Humphrey should supply Congress with the details as long as he has made his views on the subject a matter of public record.

There's a possibility, however, that Patman will be talked out of going ahead with his investigation. In the past, he has not had support from his colleagues for some of his anti-Federal Reserve forays. Or he may postpone hearings for several months, possibly until after the election.

June Tax Borrowing May Hit Peak

Many companies plan to borrow more than last March. They can't meet tax obligations out of working capital.

Although business activity is showing signs of weakness (page 26), demand for credit by business corporations is slated to rise during the next few weeks.

The Fed itself has been waiting to see what June demand would be like before definitely shifting its policy. Both Fed officials and banking men admit that they have no clear notion of corporate demand for funds. But nearly 100 corporations queried by BUSINESS WEEK reporters this week make plain that business will be borrowing heavily from banks to meet June tax payments.

• **Near Peak**—In fact, the survey reveals, demand for bank credit in June will be close to the peak level reached around the March tax payment date. At that time both the Fed and the banks were overwhelmed by the strong demand for credit. Bank borrowings increased by \$1.7-billion, and that prompted the Federal Reserve System to intensify its tight money policy (BW—Apr. 7 '56, p. 23).

The Fed interpreted the strong March demand to mean that the economy was getting set for another push upward. Instead, there has been a slight dip, particularly in housing, autos, and other consumer durables.

Heavy demand for credit by business in June does not presage a new upturn, according to the BUSINESS WEEK survey. The fact is that many companies have pared their working capital almost to the vanishing point. They are being forced to borrow in order to meet tax payments on profits made last year, and not for increased spending.

• **Interpretation**—The Fed will undoubtedly interpret new loan demand in a different light from that of last March. It has already announced that it is prepared to furnish the banks with reserves to meet seasonal demand (BW—May 26 '56, p. 25).

This means that credit will be available. Normally, an easing in availability is followed by an easing in in-

terest rates. But in view of the heavy demand indicated by the survey, it is doubtful that business will find loans any less costly than they have been during this spring's period of tightness.

• **Prospects**—A majority of companies in the survey declared that they would not borrow in June. But most of these companies say they don't make a practice of borrowing for taxes anyway.

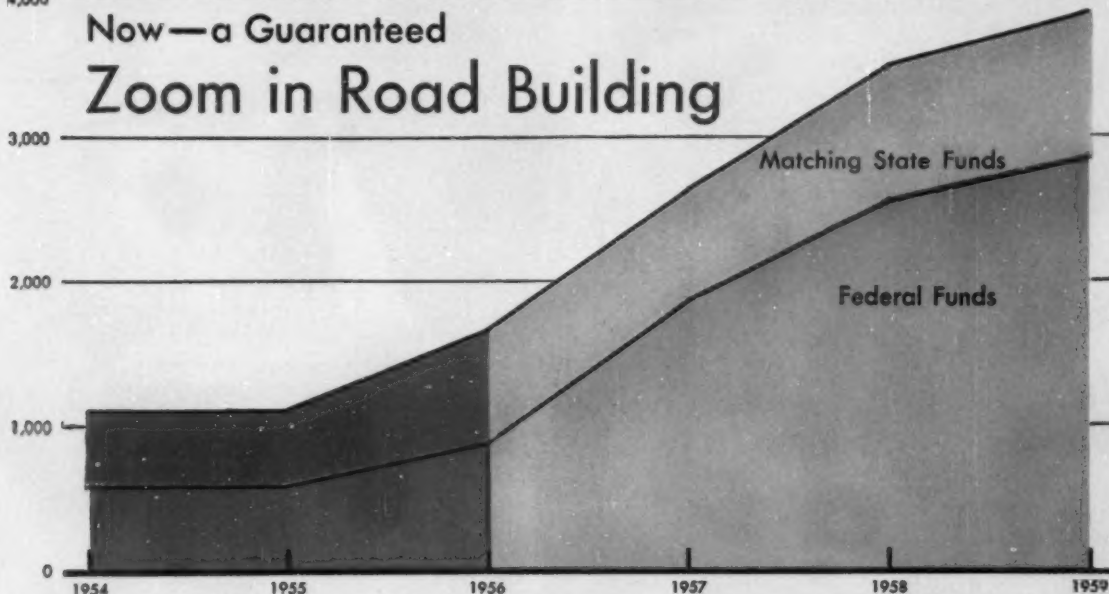
The companies that regularly borrow from the banks to meet tax payments say they will be approaching the banks again. And in many cases, the June borrowings will be as large as they were last June, or even as large as in the peak March period.

For example, one big West Coast utility admitted its June borrowings will be much more than in June, 1955, and about "25% more than in March, 1956." It adds that it is being forced to borrow on such a heavy scale because the funds it had accrued for tax payments are being used to finance a new construction project.

A big appliance manufacturer in the East also reported that its June borrowings will be larger than in either March, 1956, or June, 1955. And as proof of the big upsurge in demand this year, one Cleveland manufacturer states its March and June borrowings will be 3½ times more than last year.

• **New Borrowers**—There is even a possibility that June borrowings will exceed those of March. This is indicated by the fact that a number of companies that did not need money in March will be borrowing now. One Midwest manufacturing company declared that it is borrowing in June for the first time in its history. It attributes its need to the current credit squeeze.

The survey showed a minority of companies that borrowed in March but won't be borrowing now. In fact, only three out of nearly 100 said their March borrowings had made new commitments unnecessary. A few others hope to be in this position but are still unsure.



Date: BUSINESS WEEK Est. Based on Bureau of Public Roads.

©BUSINESS WEEK

Biggest Public Works in History

The multibillion-dollar highway program, first proposed by Eisenhower back in 1953, is just about ready to go. The Senate this week was debating some final points, but there was little fuss about the size of the spending or about the taxes to pay for what has been rightly called "the biggest public works program in history."

Passage of the bill, and Eisenhower's signature—both taken for granted at midweek—will make the federal government for the first time the biggest single factor in road building.

• **What It Is**—The new program, which will begin to take hold even this month, is going to call for:

• A 13-year construction program, with new and added taxes to pay the federal share of the cost.

• By 1969, a limited-access, 40,000-mile superhighway interstate network for the U.S.

• Bigger federal support for this interstate system—the U.S. Treasury supplying 90% of the funds, the states only 10% (now it's 40% from the states, 60% from the U.S.).

• A total of \$37.6-billion in federal funds all told—\$25-billion for the interstate system; \$11.4-billion for other roads for which the states must match each federal dollar with one of their own; and \$1.2-billion for roads in parks and Indian reservations.

• A trust fund to hold the highway tax money until it's ready for

disbursement to the state agencies that will actually contract out the work.

• **Taxes**—This pay-as-you-go program bogged down last year on the tax provisions. This year—despite the fear of voting taxes in an election year—the bigger bite on the motorist and others went through without a hitch. Here are the new taxes to become effective July 1, and run for 16 years:

• Federal tax on gasoline and diesel fuel, up 1¢ per gal. to 3¢.

• Manufacturers' sales tax on trucks and buses, up from 8% to the 10% now paid on passenger cars.

• Tire excises, up from present 5¢ per lb. to 8¢; camelback for retreading is taxed for the first time, at 3¢ per lb.

In addition, truck operators for the first time are likely to have to pay an annual federal registration fee. The amount is one of the issues House and Senate conferees will probably have to settle (BW—May 26 '56, p60).

The added taxes are expected to bring into the trust fund about \$612-million during the first year. Later, the total annual income to the trust fund might hit as much as \$3.2-billion.

• **Ready for the Gun**—Plans for spending these new highway billions will get under way immediately. About the time the taxes go on, the Commerce Dept.'s Bureau of Public Roads—which will supervise the federal spending and state compliance with federally approved standards—will be ready with

the amounts to be available to the states. The total to be allocated to the states beginning July 1 will be around \$1.8-billion—against \$875-million for fiscal year 1956, just ending.

State highway departments can immediately begin negotiating for new rights of way, contracting for engineering plans, or even scheduling bids.

Over 11,000 miles of the interstate system have been mapped out.

Congress is working out differences over just how to cut each state's share of the new pie. The House wants a new method that generally favors the densely populated states.

A bloc of states, mostly from the West and Midwest, are fighting for the traditional federal allocation formula, which would favor them.

• **Other Points**—Other provisions in the bill are important:

Weight restrictions on trucks using the interstate system will be called for in the final bill. The Senate version also calls for size restrictions.

Application of federally fixed minimum wages on construction work—in the House bill—is still at issue.

• **Materials**—Manufacturers are expanding to meet the increased demand. Each \$1-billion of new highway means 16-million bbl. of cement, 76-million tons of sand and gravel or crushed rock, 510,000 tons of steel, 100,000 tons of asphalt—and \$500-million in new construction equipment.



Japan Gets Rich in Rush

Along the crowded waterfronts of half a dozen Japanese cities, the rattle of shipyard cranes and the flare of welders' torches are louder and brighter now than they have been in a decade. After the destruction of war, the restrictions of occupation days, and a depression that kept them close to complete idleness until two years ago, Japanese shipbuilders have leaped into a boom.

The shipyards of Japan are running at full capacity of about 1.5-million tons a year. In the shipbuilders' offices, there are enough orders piled up—\$700-million worth of them—to keep the yards operating at full speed for another two years. In the first three months of this year, Japan was at work on more than 1-million tons of shipping. In the same time, it launched 356,510 tons of shipping—more tonnage than any other country.

• **No. 2 Spot**—Today, Japan is the world's No. 2 shipbuilder, second only to Britain, and is almost certainly the

biggest exporter of ships. Of the ships already on Japanese builders' order books, 94% are for export.

All this prosperity has come in the last two years. In mid-1953, all but seven slipways in Japan's shipyards were empty. The Japanese government was urging shipbuilders to get rid of their surplus facilities. One year later, the turnabout had started. Orders for ships were flooding into Japan.

• **Time for a Boom**—How did it happen? First, the world's maritime nations were needing new ships. Some 18% of the 100-million tons of shipping in the world was growing old and had to be replaced. And extra tonnage was needed to cope with the increased imports of coal and iron that were flowing to Western Europe to feed the industrial boom there. This meant somebody would have to build ships.

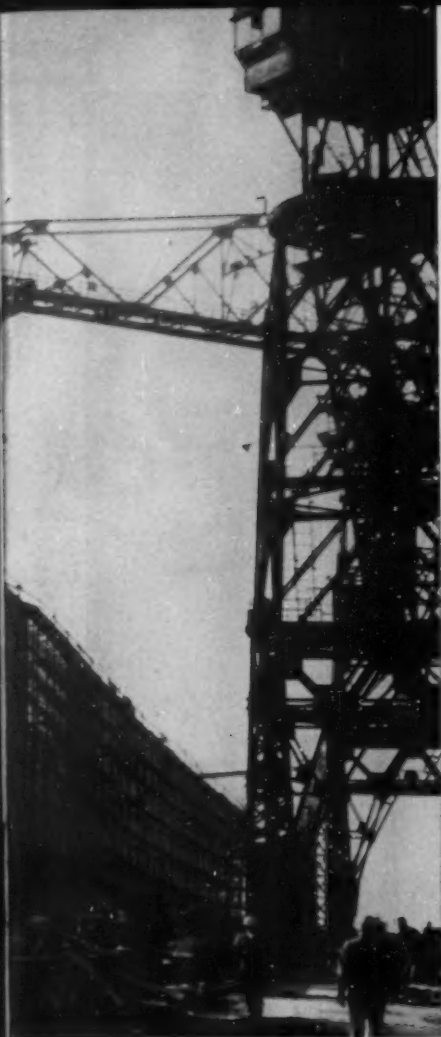
Four other factors were responsible for bringing a rich slice of that business to Japan:



SHIPBUILDING BOOM means rising employment in Japan's shipyards, where fresh activity is major aid to economy.

U.S. METHODS have helped in Japan's booming shipyards. At left, prefabricated bow of freighter is hoisted into position, speedily welded at Tokyo's Ishikawajima shipyards, oldest in Japan.

SHIPS FOR EXPORT, like 12,900-ton freighter (below), are bulk of Japanese yards' work.



for Ships

- Sliced prices. The Japanese government encouraged ship exports by offering shipbuilders a subsidy by permitting them to import crude sugar amounting to 5% of the price of the ships they sold abroad and then buying the sugar from them at a price that gave them a better profit on their ship sales. The subsidy was abolished in November, 1954, but while it lasted it did help get the boom under way.

- Long-term payments. The shipbuilders let foreign buyers put up as little as 40% to 50% of their ships' costs at delivery, agreed to take the rest over the next five years. Now the shipbuilders have reverted to full payment on delivery contracts. But, again, deferred payments helped get them going.

- Quick delivery. With its shipyards almost idle in early 1954, Japan was able to promise delivery within a year. Meanwhile, European shipyards were working two and three years ahead. This advantage is passing now. It takes



about two years from order to delivery of a Japanese-built ship.

- **U. S. methods.** These have secured the boom for the present. Shipbuilders learned U.S. techniques, particularly fast electric welding. And so were able to speed up ship production.

- **U. S. Orders**—You get a reflection of the shipbuilding boom in the fact that U.S.-owned shipping companies that operate ships under foreign flags bought one tanker and two ore carriers from Japan in 1954; three tankers and two ore carriers in 1955; and currently have eight tankers and five ore carriers under construction in Japanese yards.

Twenty big Japanese companies are sharing the bulk of the new business. Chief among these, the largest Japanese shipbuilder, is Mitsubishi Shipbuilding & Engineering Co.

High on the list, too, is Ishikawajima Heavy Industries Co. (pictures). Between March, 1954, and March, 1955, its ship orders jumped from \$9.9-million worth to \$23.9-million worth—a leap fairly typical of the major Japanese shipbuilders' business.

- **American Outfit**—The shipbuilder with facilities for making the biggest ships in Japan is a U.S. company, National Bulk Carriers, Inc. In 1951, it took a 10-year lease on the former Japanese naval shipyard at Kure. Last January, it started work on the world's largest supertanker, a 52,000-tonner, scheduled for completion in August. The company also has plans for a 54,000-ton ore and oil carrier.

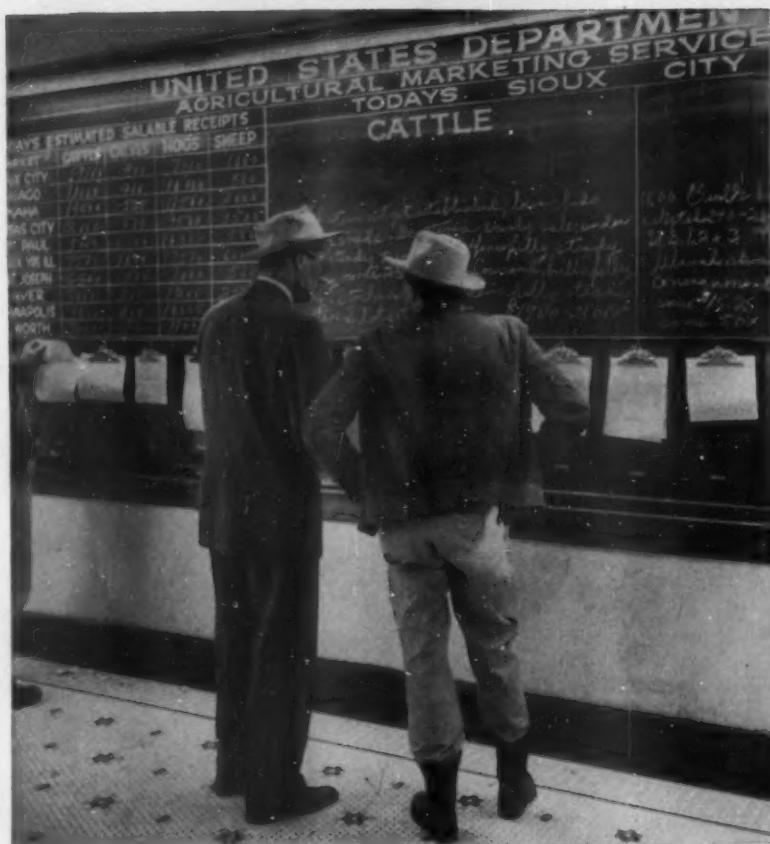
- **How Long?**—All 20 of Japan's major shipbuilders are prospering. They are also worrying about the future.

They guess that shipbuilding is sure to prosper in the next decade. Almost half the world's shipping will reach its efficiency limit of 20 years by 1960, they say. But they wonder if Japan will keep getting an increasing share of the shipbuilding business.

- **Steel Problems**—Some fear the Japanese shipyard boom may be spiked by Japan's steel problems.

The shipbuilders guess they'll need 70,000 tons of steel plate a month during 1956 to keep their programs going. The steel producers say they'll be able to supply only 61,000 tons a month.

Japanese steel prices are among the most unstable in the world, leaping up, skidding down, as the immediate market indicates. This year, the rising price of steel probably will push up the cost of ships by 10% to 25% above last year. They could even push the price of Japanese-built ships above the world average. Indeed, because of this, many Japanese shipbuilders are becoming cautious about accepting new orders. Some are talking about putting escalator-price clauses in new contracts. But the shipbuilders guess this would rapidly lead to a scarcity of customers.



HIGHER PRICE SUPPORTS are part of the Administration's tactics for . . .

Checking the Farm Slump

Shoring up farm income, which has been tailing off ever since 1951, has become a major project for the Administration.

Now that auto sales, steel production, and housing starts have joined the farm downturn, the combined picture has White House economists worried. And the prospect that the real impact could hit in the third quarter (page 27) looks too close to election time to suit GOP politicians.

Here's what has happened to farm income since 1950:

In that year, the realized net income of farm operators totaled \$12.9-billion. In 1951, this figure climbed to \$14.8-billion. Since then, it has been in a gradual slide—to \$10.8-billion in 1955. This year, it's still running behind, and probably won't top \$10.5-billion.

- **Counter Moves**—The Administration is making two moves against this trend—through new legislation designed to pay farmers to take land out of production, and by out-and-out boosting of price supports under present laws. These moves could push income up fairly substantially in 1957—to about \$11-billion.

The soil bank that Congress has finally approved, has been billed as a program that can put \$1.2-billion into the farmer's pocket. The President signed the bill this week, but only a small part of the money can actually be paid out in a farming season that is half gone. It's main contribution will be psychological.

- **Objections**—The Administration faces a tremendous job to overcome the farmers' reservations concerning the soil bank.

First, many farmers doubt that the Administration will offer enough to tempt them to put expensive, highly productive land into the soil bank. For example, farmers expect the soil bank payment on corn land to run from \$36 to \$50 an acre. (The Agriculture Dept. estimates that wheat would draw \$17 to \$25 an acre; feed grains \$15 to \$50 an acre; and cotton \$48 to \$60.) Farmers in Illinois and Iowa—whose land is valued at \$400 to \$500 an acre—say they would have to get \$50 or more an acre. They figure that, on land yielding 80 bu. to the acre, they could earn \$100 an acre producing non-com



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AVONDALE MILLS Textiles	7	135,000
W. C. HAMILTON & SONS Paper	8	83,613
SEALED POWER CORP. Piston Rings, Pistons	6	246,444
THE LIONEL CORPORATION Model Trains, Photo Equip	5	165,995
HEINTZ MANUFACTURING CO. Metal Products	9	465,912
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TOTAL SAVINGS FOR ALL 8 COMPANIES		\$1,455,493

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pliance corn supported at \$1.25 a bu. Also, the land put into the soil bank would have to be fenced to facilitate compliance checking—an added cost to the farmer.

The second objection is that the required "freezing" for a three-year period of land put into the acreage reserve would foul up crop rotation programs.

• **Sales Pitch**—The White House, however, is confident that it can make the program financially attractive to farmers. A spokesman pointed out shortly before Congressional passage of the farm bill that the Administration never has announced the actual figures it will pay farmers for taking the land out of production. "You can be sure," he says, "that the amount offered will be comparable to what the farmer would receive in income from cultivation of the land in an average year."

The Administration feels that what it is offering the farmer is price insurance, that he can count on a minimum of \$50 an acre, for instance, for his corn. Then he won't have to worry about drought, hail, wind, and other acts of nature curtailing his production—or a bumper crop curtailing his price.

Once the bill is signed, the Administration will unleash a campaign to sell the soil bank to the farmer.

This year, the only crop sure to come under the plan is winter wheat. However, a farmer in the north central or western states who has just planted corn might go in, or a farmer whose initial corn plant wasn't a success. He could plow up and put the land into the soil bank.

• **At Work**—Aside from the new legislation, the Administration has moved to prop up the farmer's income through price supports. Here's a sampling of what has already been done:

Corn: In the politically strategic commercial Corn Belt, price supports have been raised from a previously announced \$1.40 a bu. to \$1.50 (from 81% to 86.2%); and for the first time, there is a \$1.25 a bu. price floor under non-compliance corn.

Wheat: The Administration has announced a revised support price of \$2 a bu., or 83.7% of parity.

Dairy Products: The Agriculture Dept. has upped the support level to 58.6¢ per lb. (81% of parity); and manufactured milk supports have been increased to \$32.5 per cwt., or 84% of parity.

Cotton: Supports will drop from 90% of parity to 82.5% for upland cotton, and 75% for long staple.

Livestock: The Administration is prepared to move in with a beef purchase program should the price dip below \$16 per cwt. An \$85-million pork purchase program was put into effect last winter, when the hog market dropped to \$10 a cwt.

Boil-Up on Canada's Gas Line

Trans-Canada Pipe Lines' U.S. promoters and their backers in Ottawa are targets of verbal fire. But line may be in business soon.

Engineers north of the border have been fretting a long time over the problems they'll face in stringing the \$375-million Trans-Canada natural gas pipeline across the 2,200 miles from Alberta to Canada's industrial east. But lately, the pipeline project has become more than just an engineering challenge. Three large U.S. corporations and the millionaire independent oilman, Clint Murchison, are having trouble raising money to build the line. And their plans for handling the project stirred up a ruckus that's putting fresh strain on U.S.-Canadian amity.

Now it seems that Trans-Canada Pipe Lines Ltd.'s project finally will get under way. Canada's Liberal government this week used radical measures to speed necessary legislation through the House of Commons. It resorted to the rarely used parliamentary device of closure—the guillotining of debate—to ram its bill ahead. For this move, it is taking some of the bitterest criticism it has ever received since it won power 21 years ago.

• **Controversy**—But it's not just parliamentary maneuvering that has the government's opponents enraged. They don't like the provisions of the bill, under which:

• The governments of Canada and of Ontario jointly will build the uneconomic, \$118-million, 675-mile stretch of the line across northern Ontario, and will lease it to Trans-Canada with an option to buy.

• Ottawa will lend Trans-Canada up to \$80-million until next Mar. 31 so that it can lay the 575 miles of pipe between Alberta and Winnipeg, giving Winnipeg its gas by Dec. 1.

Trade & Commerce Minister C. D. Howe made the first part of this deal with Trans-Canada last fall. Opponents have been hitting at him for this ever since. They've been demanding that the federal or provincial governments themselves lay the pipeline.

Then, by the time the House of Commons got around to debating ratification of his agreement with Trans-Canada, Howe figured that the government's offer to provide help for the line across northern Ontario wasn't enough. So he added the \$80-million loan proposition to his bill.

• **Ferment**—This has done most to inflame the opposition.

"It's a Colombo Plan for Texas tycoons," sneers a Socialist. And a Conservative protests that the Canadian

government "has no mandate to take the money of the Canadian people and hand it over to Americans."

Canadians concede that their own private investors wouldn't build the line. Trans-Canada's U.S. interests—Murchison, Tennessee Gas Transmission Co., Gulf Oil Corp., and Continental Oil Co.—have agreed to offer 51% of the company's shares inside Canada when it goes to the public. But even these facts haven't quieted the row.

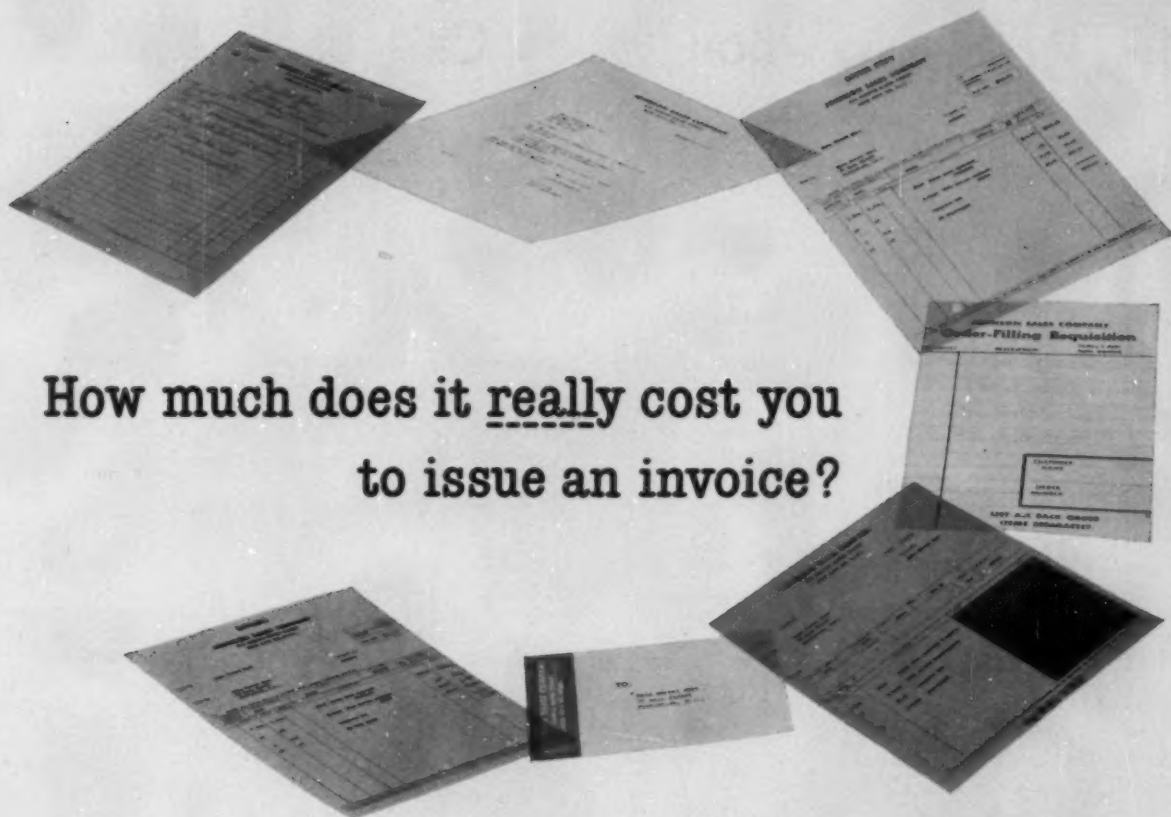
• **Delay**—Canadian pride is further chipped by Trans-Canada's recognition of the fact that if the line is to be economic it must export gas to the U.S. Midwestern states. Midwestern Gas, a Tennessee Gas Transmission subsidiary, has contracted with Trans-Canada to take about 40% of its throughput and sell it in the Midwest. But the deal has run into heavy opposition from other pipeliners in the Midwest. Their opposition has slowed the long process of Midwestern Gas obtaining permission from the Federal Power Commission to tie in to the Canadian line. At best, Washington observers guess, FPC will not rule on Midwestern Gas' application for another year.

The prospect of this long wait plus the added pressure on the Liberal government persuaded Howe to offer Trans-Canada the \$80-million loan to get the Alberta-Winnipeg segment of the line in business.

• **Loan Terms**—If Trans-Canada doesn't repay the loan by next Mar. 31, the government will take over the company, and lay the line itself. This is something Howe has resisted—he doesn't want the government to be between the conflicting interests of producers and consumers.

Meantime, there's increasing speculation that to speed an FPC decision, Tennessee Gas Transmission's competitors might agree to buy some of the gas that TGT brings into the Midwest from Canada.

The motivation for this seems to be increasing talk in Canada that if U.S. companies wait too long, Canada will do without sales to the U.S. There's doubt in Washington that Canada really believes its market is growing fast enough for this. Both the State and Defense Depts. are known to favor tying onto the Canadian line, to give U.S. industry an alternative gas source and to strengthen Canada.



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In Business

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High Court Plugs Tax Out On Unrestricted Stock Options

The Supreme Court this week stopped a possible flood of unrestricted stock options that do not specifically qualify under the 1950 law (BW—Apr. 7 '51, p45).

The high court, upsetting a whole series of lower court rulings, held that for purposes of computing your gross income it makes no difference whether the stock option was given you as compensation or to give you a proprietary interest in the company.

Completely untouched by the new ruling are all those stock options that qualify under the 1950 law—where the purchase price of the stock is not less than 85% of the market price, along with other restrictions.

• • •

SUB Payments Are Income But Not Wages, Tax Men Say

The Internal Revenue Service this week made a ruling that helps to clear up uncertainty over Supplementary Unemployment Benefits (page 54). It said SUB payments must be counted as income but not as wages.

This means that workers must include SUB benefits as part of their reportable income at tax time, although income taxes on them will not be withheld. But workers can receive payments both under SUB and under the federal-state unemployment insurance system, which bars benefits to anyone who is receiving "wages." Also, SUB payments are exempt from social security and federal unemployment taxes.

• • •

Auto Suppliers Move Once More To Get Strength Through Unity

Orange blossoms continue to be the official flower of the auto parts business (BW—May 26 '56, p36). Last week, troths were plighted by Federal-Mogul-Bower Bearings, Inc., of Detroit, and National Motor Bearing Co., Redwood City, Calif. If stockholders say an expected "Yes" on July 25, the actual honeymoon will start July 31.

It's a tax-free, stock exchange deal, with Federal issuing seven shares of stock for each 10 of National.

National's line of oil seals (1955 sales: \$19-million) will round out Federal's line (1955 sales: \$85-million). A sweetener to the deal is National's development work on the first successful seal for railway freight car journal boxes (BW—Dec. 11 '54, p144).

In the electronics trade a deal was made when Raytheon Mfg. Co. sold its TV and radio making divi-

sions to Admiral Corp. for an unannounced price—rumored to be \$5-million. Admiral will operate the new facilities as its Belmont Div.

Raytheon pointed out that the properties sold had produced less than 10% of the company's total business in the year ended May 31. Its radio and picture tube division is not included in the sale.

Stockholders of all companies involved have O.K.'d the merger of Atlas Corp. with RKO Pictures and four other companies in which Atlas already holds an interest.

Only stockholder approval is needed to set the seal on California Packing Corp.'s purchase of a two-thirds interest in Canadian Cannery, Ltd., of Hamilton, Ont.

• • •

Sale of Surplus Rubber Plant Runs Into Dispute in Congress

A sharp controversy shaped up at midweek in Washington, seriously threatening the expected quick approval of the proposed sale of the last government-owned synthetic rubber plant to Union Carbide & Carbon Corp. (page 81).

The Rubber Producing Facilities Disposal Commission wants Congress to O.K. the sale. But Atty. Gen. Herbert Brownell has refused his blessing on antitrust grounds, saying the deal would not "best foster the development of a freely competitive synthetic rubber industry."

The deal is also being opposed by Publicker Industries, Inc., the unsuccessful bidder for the alcohol butadiene plant at Louisville, Ky.

Observers think the sale may be upset in Congress.

• • •

Business Briefs

Out of the family. For the first time, the public is being invited to buy common stock in the family owned R. R. Donnelley & Sons Co., big Chicago printer of telephone books, magazines, and mail order catalogs. In all, 573,575 shares will be offered, probably at between \$25 and \$30.

Up but slightly down. Internal Revenue Service figures indicate that cigarette smoking in the U.S. was up 4% in the first quarter over the year-before figure. But for March alone, there was a 4% drop from the 1955 month.

Economic indicators: Trade sources indicate that new orders for machine tools in April were \$83.5-million, a gain of 59% over the 1955 month. Still, the April figure was 12.4% below March . . . The National Assn. of Purchasing Agents, in its survey for May, says the pace of the nation's business is "tending toward a trot rather than a gallop." But it's still far from sluggish, says NAPA . . . Life insurance sales in April were more than \$4.2-billion, a gain of 14% over the year-before month, according to trade figures . . . The Commerce Dept. says U.S. exports in April were \$1,551-million, a one-year gain of 23%.

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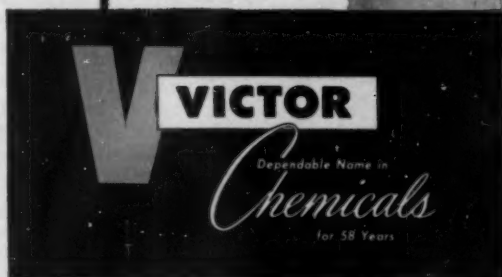
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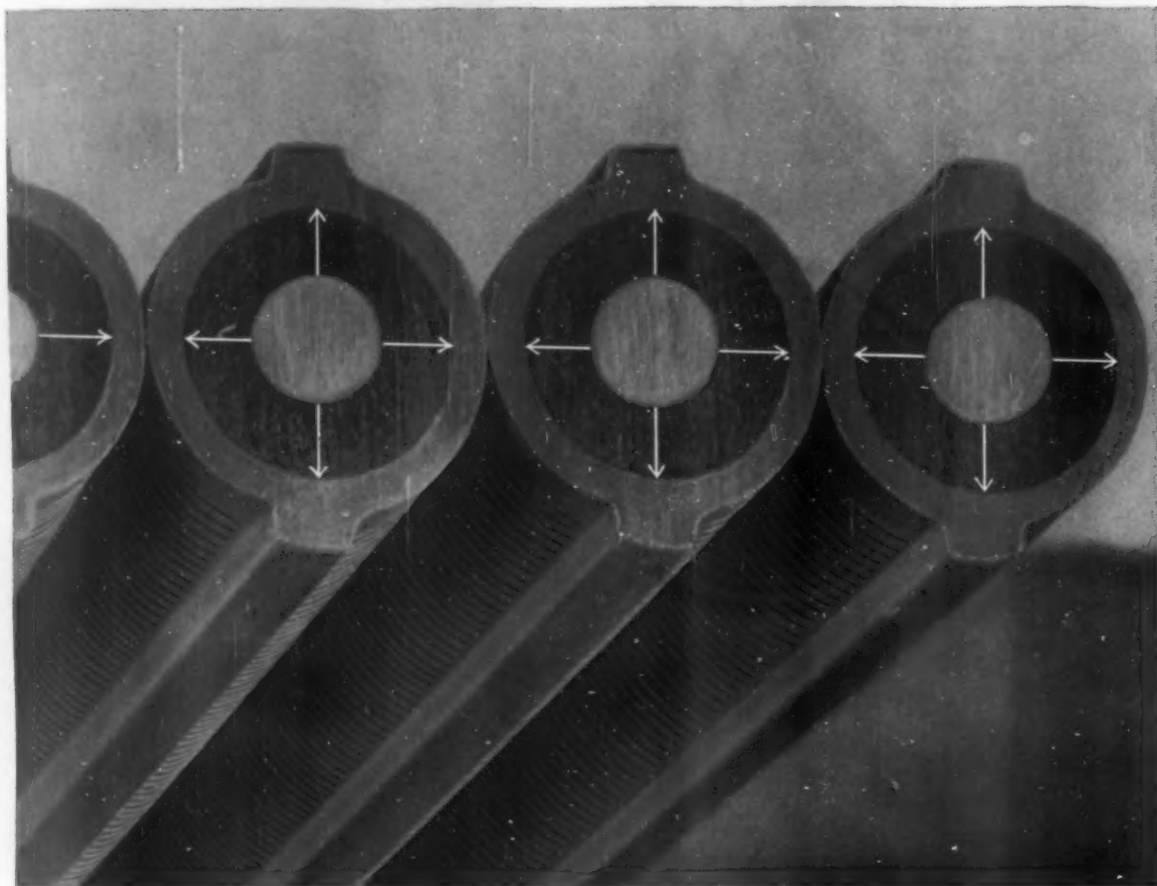
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WASHINGTON OUTLOOK

WASHINGTON
BUREAU
JUNE 2, 1956



Now's a good time to look ahead on legislation. Congress will adjourn in about 60 days. The things it does and doesn't do will make election year issues, of course. Also important is the impact on business prospects—on individual lines and business in general. A rundown of highlights:

A sharper rise in government spending will be underwritten. Note that with the exception of foreign aid, there's little or no opposition to the Eisenhower plans to increase the rate of spending.

Spending for this year, fiscal 1956 which ends June 30, will exceed the Administration's January estimates by \$1.6-billion. That's the latest Treasury figure. It may turn out to be on the low side.

Spending for the year that starts July 1, fiscal 1957, will be revised upward, too. In January, the Administration figured outgo at \$65.2-billion. Up to now, it hasn't changed this estimate. But Congressional sources interpret the rise this year as meaning another boost in the 1957 estimates—by at least \$1.5-billion.

A tax cut this year still seems unlikely. The Treasury's forecast of \$1.8-billion surplus simply isn't enough to underwrite a voter-impressing cut. To be felt at all, the cut would have to unbalance the budget. If you do get a real tax cut movement before this Congress adjourns, the plan will be to make any reductions voted effective next year.

Look beyond the highway building bill to what's expected 10 years from now (page 31). The aim is a total outlay of \$11-billion to \$12-billion yearly on roads. That includes federal, state, and local spending.

Here's the measure of the expected jump: Total road outlays this year by all agencies—federal, state, and local—are figured at \$5.7-billion. The plan is to double this. It means more of everything used on roads—machinery, men, concrete, asphalt, steel.

Congress will vote the start this session. Federal financing will be met from higher use taxes. That means more taxes on tires, tubes, gasoline, trucks. It's the biggest public works program ever O.K.'d.

Federal aid to school construction still is snagged on desegregation. But if it does fail, as expected, this year, odds are that it will come later. Many backers think next year will bring the start. It's an off-year politically. When it does come, it will mean another jump in the spending by Washington for public works. It will be the sort of program that requires extra spending by local governments.

On labor, no major legislation is in sight this session.

Expansion of wage and hour coverage has the best chance, and is getting most support from the Administration. But it looks dead.

Taft-Hartley Law changes simply aren't in the picture. The unions still back them as a political goal, but are finding it very hard to whip up the local level support necessary to force revisions.

In the antitrust field, action will be very limited.

Pre-merger notification is rated the best chance. It would require companies planning a marriage to notify Washington first.

WASHINGTON OUTLOOK (Continued)

WASHINGTON
BUREAU
JUNE 2, 1956

Power for the Attorney General to seize documents isn't likely. The Administration wants authority for the Attorney General to subpoena the records in civil cases. Congress isn't likely to go along.

Aid for auto dealers has little or no chance. These are the bills to ban so-called new car bootlegging, limit phantom freight, and permit territorial security. Auto makers have acted to ease dealer complaints.

—•—
The Defense Production Act will be extended. That's the basic law on industrial mobilization, carried over from Korea.

Company officials in the "executive reserve" may have to report their personal finances in order to stay on the list of men ready for emergencies. It isn't sure. There's sentiment to put them on the same basis as the WOCS—those who work without compensation on defense plans.

Quick amortization of defense facilities won't be changed in the extension of DPA. The basic authority is in the revenue law, but policy is to use it only as defense planners recommend.

—•—
As for customs simplification, odds are against approval. The House voted it last year, but there's strong Senate opposition. On some import items, it would amount to a tariff cut, never popular in election years.

OTC is in trouble. That's the Office of Trade Cooperation, aimed at increasing traffic between nations. The Administration is backing the bill. But Democrats say they won't bring it up until the White House can show enough GOP support to get passage.

—•—
A postal rate rise this year is unlikely. But most observers here think it is only a matter of time. They see this pattern:

On letters, first class, from the present 3¢ to 4¢ per oz.

Air mail, from the present 6¢ rate to 7¢.

Second class—magazines and newspapers—upwards of a 70% rise spread over a period of about five years.

Third class, circulars and advertising, a 30% boost.

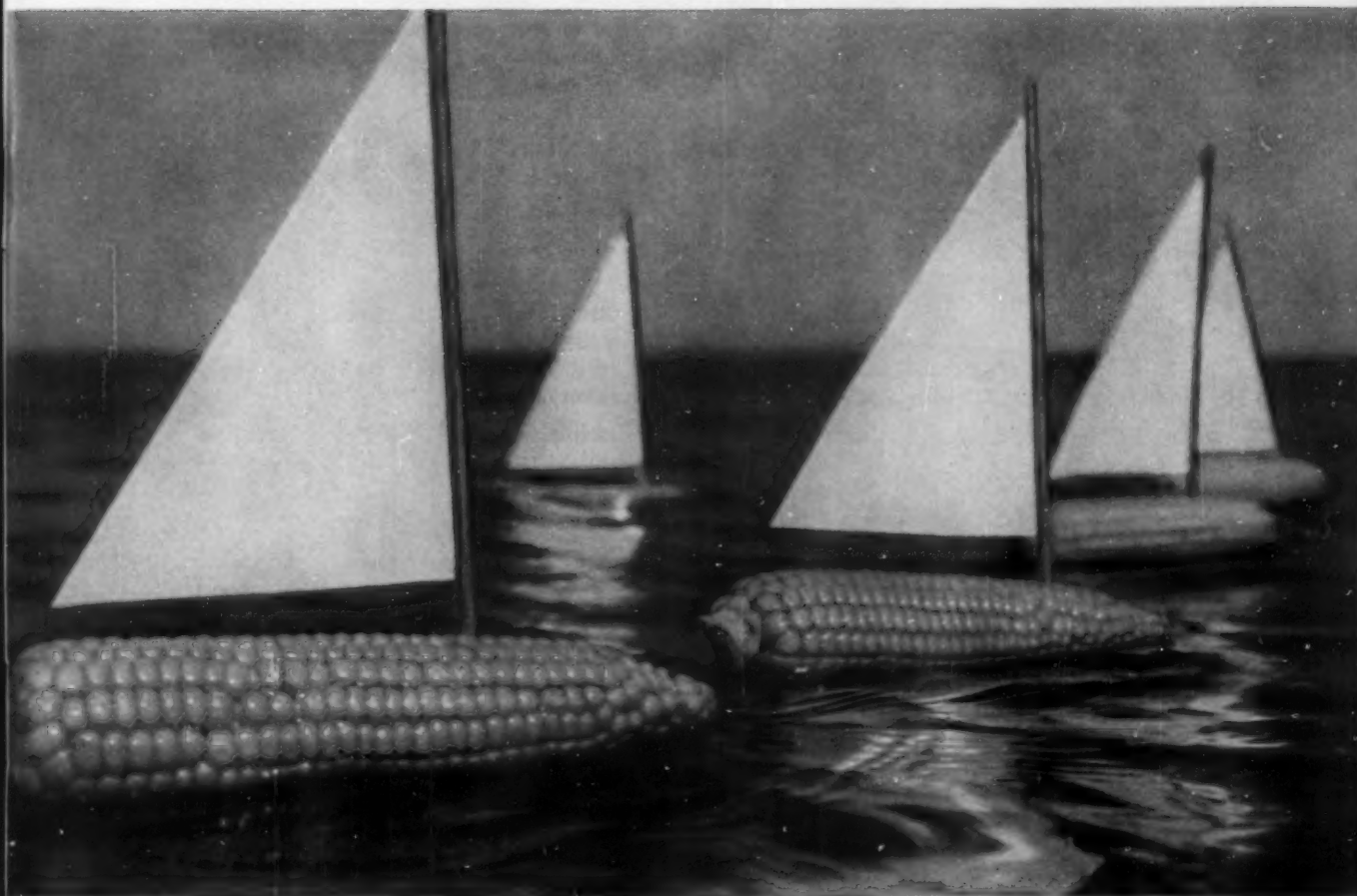
—•—
All the businessmen who advise government will be listed. This is a project of the House Committee on Government Operation. The roster may well become one of the hottest issues in this year's Presidential election.

Note the first volume, out this week. Its 600 pages cover just the Agriculture Dept.—lists the advisers and their fields, from the sale of butter to the disposal of surplus grains. It's only the starter. Other volumes are coming.

The Commerce Dept. may be next. The committee's data already are on the presses. It will be another detailed listing of businessmen who are called in to consult on policy. One of the biggest volumes will deal with the Defense Dept.—between 1,000 and 1,500 pages.

The political use of the listing is easy to see. The Democrats, lacking any sure-fire vote-getting issue—such as war or depression—will hammer the theme that big business dominates Washington. You will see candidates for office use the roster to back their charges. They will play up the line that businessmen who haven't been called in to advise government are at a competitive disadvantage.

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LABOR

Hard Coal: Peace and New Hopes

● Strike ends as Glen Alden agrees to pay royalty arrears, Lewis pledges to press other delinquents.

● For the mine workers, the pact means a chance to pull its anthracite welfare fund off the rocks.

● For the company, there's some prospect of a stabilized industry, with labor costs more equal for all.

The United Mine Workers and Glen Alden Corp., the nation's top anthracite producer, last week settled a 15-day strike on terms "satisfactory to both parties." To UMW that means a hope that its anthracite health and welfare fund may be pulled off the rocks; to Glen Alden, a hope that the hard-coal industry may be stabilized.

The Glen Alden miners struck May 8 to force the company to pay royalties to UMW's hard-coal welfare fund. Glen Alden had withheld payments since Jan. 1 because of what it called UMW's "lack of uniformity" in collecting royalties. The company charged that the delinquencies of other producers amounted to millions of dollars, and that their failure to pay gave them "an unfair competitive advantage" in the industry.

• **The Terms**—In the settlement last week:

• Glen Alden agreed to pay "substantially all" of its arrears, estimated by the company at \$379,585 for the first three months of this year, by UMW at \$577,000. The company already had paid \$151,237 in royalties for April.

• UMW agreed to press other delinquents for payments. The union estimated the total amount due at about \$3.5-million; Glen Alden set the figure at more than \$5-million. In announcing the strike settlement, the company's president, Francis O. Case, said the union already had collected "a lot of money" from other delinquents. He added, "That's what we wanted. It puts us on a more equitable basis with other companies."

At the same time, in a move the parties said wasn't connected with the strike, anthracite's Committee of 12 (six each from labor and management) worked out a new production schedule under Pennsylvania's anthracite mining control law. The committee announced that new quotas have been accepted by 93½% of the industry, and will be put into effect shortly by Pennsylvania's Gov. George M. Leader.

Case linked the two developments, commenting that he is hopeful that the strike result—UMW's promise of uniformity in collecting royalties—and the new coal production plan will result in a more stable anthracite industry.

• **Uniformity**—Earlier, Case had written John L. Lewis that the "lack of uniformity in the union's practice of collecting assessments, together with its failure to effect a union contract with other producers (thus permitting such operators to pay nonunion wage rates as well as escape welfare fund assessments) has been a major factor in the price instability of this industry."

Glen Alden emphasized to Lewis that a price differential of 50¢ a ton is a sizable one in the coal marketplace.

The UMW walkout against Glen Alden's 10 mines and four breakers called new attention to the growing problems of Lewis' anthracite health and welfare fund. While the bituminous fund can boast a balance of nearly \$100-million, the hard-coal fund is on the rocks. Its trustees have had to cut benefits. In some cases payments to beneficiaries are running nearly two years behind.

Lewis used to deal with his soft coal and hard coal miners on a "separate but equal" basis. Although they all belonged to the same union, there was no realistic way of dealing with the problems of the two groups together. Hard coal and soft coal are as unrelated as two industries can be. The financial interests are different, the products and the prices are different, and the mining problems are different.

• **Matching Pattern**—Nevertheless, for many years, when Lewis negotiated a contract with the bituminous industry, the pattern was cut for a comparable settlement with anthracite producers a few weeks later. For a long time the average hourly earnings of the two groups were quite similar. When the bituminous miners won a welfare fund

—with a 5¢ royalty 10 years ago, the anthracite miners got one, too.

In 1952, however, dissimilarities started to appear. The anthracite fund was in trouble. Lewis got the royalty rate paid by anthracite operators up to 50¢ a ton. He settled with the soft coal group for 40¢. Those rates are still in effect.

Last August, when Lewis wrung a \$2-a-day increase out of the soft coal industry, everybody wondered what he would do about hard-pressed anthracite. He did nothing then or since. A spread is developing between the two groups.

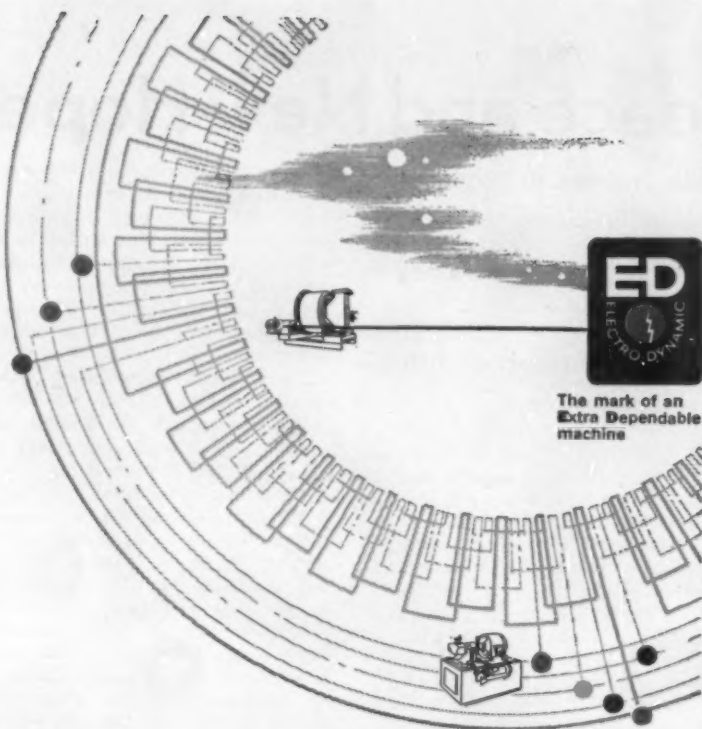
• **Pressure on Fund**—In the meantime, the union's anthracite welfare fund was getting into deeper trouble. Not only did shrinking output cut the fund's revenue, but some companies were not paying on what they did produce. As more mines were closed and as more miners were laid off, more applications for pensions came in. Over 15,000 are on the anthracite pension roll now.

The fund dealt with these demands by cutting out payments for distressed and disabled miners, and by reducing pensions from \$100 to \$50 a month and death benefits from \$1,000 to \$500.

• **Earlier Woes**—This isn't the first time UMW has had trouble from the economic disparities in the industry it covers. Back in 1924, the union's attempt to extend its hold into the Southern bituminous fields almost ran it on the rocks. Following World War I, the coal union under its new leader, John L. Lewis, was fairly bursting to take advantage of rising prices and demand the removal of wage controls. It quickly succeeded in tagging Northern operators with a contract upping wages an average of 27%.

Shortly after this contract was signed, coal production fell. Continuing a pre-war trend, coal operators moved south, to nonunion fields. Faced with this threat to its industrywide bargaining position, UMW vowed to take "no backward step," to sign no contracts below the prevailing rate. In 1924, it signed the famous Jacksonville Agreement under which Northern operators were unable to cut wages. The trend south picked up, more Northern mines closed. Since UMW could make little organizing headway in Southern mines, it was finally forced to sign agreements undercutting the Jacksonville pact, despite its firm declarations.

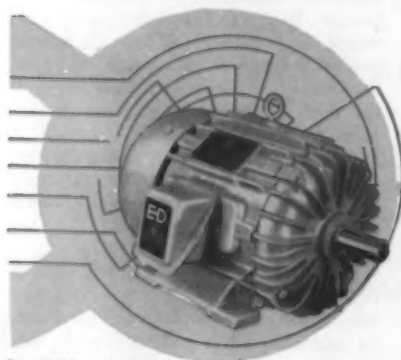
It took UMW almost a decade to begin recovery from this blow to its prestige and to retrieve the loss of membership. **END**



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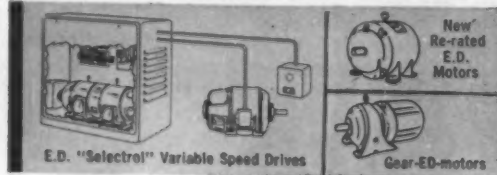


PRODUCT OF GENERAL DYNAMICS

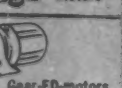
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As Steel Goes . . .

Wage talks open as gov-
ernment aide warns that even
a short strike could hurt the
economy. But he's hopeful.

Steel negotiations got under way in Pittsburgh this week after a government warning that even a short strike would have a "depressing effect" on the national economy.

Joseph F. Finnegan, director of the Federal Mediation & Conciliation Service, told a regional meeting of FMCS field personnel that the service is closely following every move in the Pittsburgh bargaining—from the sidelines.

The concern is greater than ever this year because steel—in short supply—is having a bolstering effect on the economy. According to Finnegan, the "amount of steel used in the heavy volume of construction is picking up the slack caused by cutbacks in automobile production."

• **Optimistic**—The steel contract expires at midnight June 30. The United Steelworkers has laid a hefty "package" demand on the table. Some industry circles estimate the cost as high as 50¢ an hour; USW figures it out at about half of that. But no matter what cost estimate is right, there is mounting opposition in basic steel to another large annual increase.

Despite the prospect of hard bargaining, perhaps running up to the deadline, as last year, Finnegan is optimistic. He advised federal mediators from seven states that the chances are against a work stoppage of basic steel's 650,000 workers—or, he added cautiously, "at least against an extended stoppage."

Steel unionists walked out for one day in a last-minute mixup in negotiations in 1955. Finnegan cautioned against such a "regrettable" stoppage this year. Even a brief walkout, he said, "inflicts a heavy and unnecessary expense on the companies . . . It takes quite a bit of time to get rolling again after a strike of any length."

• **Wages Up**—The FMCS director also told staff people that the trend so far this year has been for bigger wage increases than in early 1955—a factor that must be recognized in pay talks in the busy season just beginning.

During the early months of this year, wage increases averaged 10¢ to 12¢ an hour, as compared with 6¢ to 8¢ an hour at this time last year, Finnegan said.

A few days earlier Guy Farmer, former chairman of the National Labor Relations Board, now specializing in



I don't know how
the **Angel Gabriel** would have
written this advertisement
for **DETECTO** Scales

Mack Rapp, vice-president of DETECTO's industrial division, talked to me for three solid hours about DETECTO precision-engineered scales. Next day he talked for five hours more.

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For instance—the all-steel construction and all-steel lever system (*not cast iron*) which assures longer, trouble-free scale life and less maintenance cost.

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And finally, DETECTO's tare and weigh beams that extend the dial capacity 125%. This means you get greater gross weigh-

ing with minimum dial graduations.

Well Sir, Mack Rapp agreed with everything I wrote, but he rejected the approach. He wanted "shouting-from-the-housetops" combined with dignity—dramatic impact with reason-why logic.

What he really wants is a platoon of angels singing the praises of DETECTO, emphasizing each exclusive feature with gentle thrumming on heavenly harps.

On my word of honor, I've re-written this adv. twelve times. I don't know how the Angel Gabriel would do it—all I can say is that DETECTO is the most trusted name in industrial scales, that it has a half century reputation for dependability and sustained accuracy—that it makes models for every industrial need . . . from 1/100 oz. to 50 tons.

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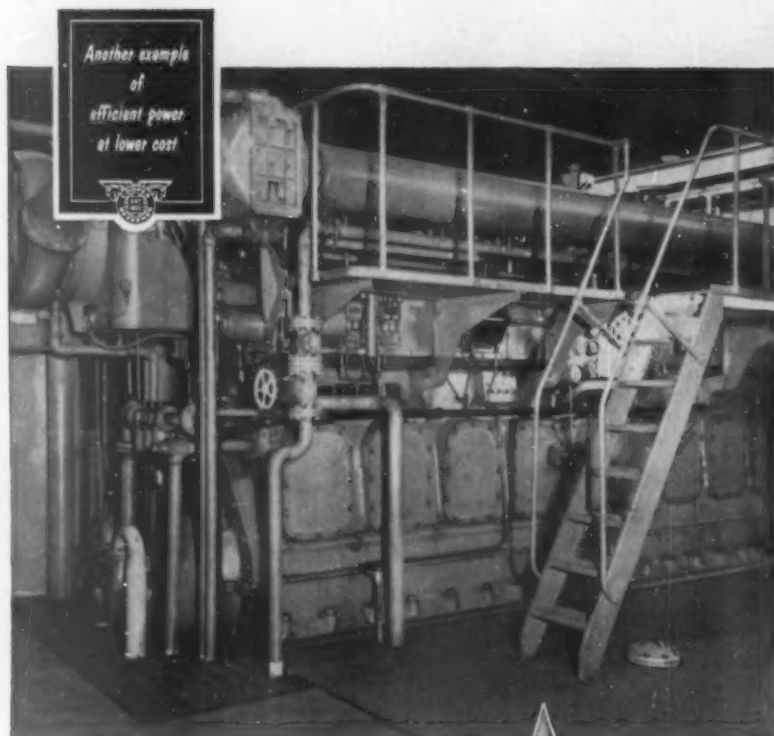
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How an OIL CHANGE saved \$30,000 a year!

• Because some diesel engines—notably Cooper-Bessemer—will run just as well on cheap residual fuel oil as on the light, more highly refined varieties, they offer their owners some whopping big savings.

As a case in point, the photo shows one of five Cooper-Bessemer in an R.E.A. power plant. Here they switched to cheap, heavy oil and thereby cut the yearly fuel bill by

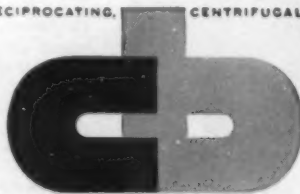
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labor law in Washington, told 600 industrial relations men at an American Management Assn. conference not to expect to settle with unions at a 6¢-an-hour figure. During the first quarter of 1956, he said, wage increases averaged 8.7¢ an hour in industry. Recent settlements, including some at about 18¢ (BW-May 12 '56, p175) pushed the average even higher.

• **Cost of Living**—Farmer cited the 6¢ figure because it is the automatic improvement-factor raise provided for this year in auto and electrical manufacturing contracts. The former NLRB head cited the rising cost-of-living index as one reason employers must bargain on a higher figure. On the basis of the most recent c-of-l index, for mid-April (BW-May 26 '56, p172), more than a million workers will be due a 1¢ raise in their next paychecks.

Frictions of Wedded Life Face AFL-CIO Meeting

AFL-CIO's executive council will open its spring conference in Washington next week with an agenda filled with pressing problems. The honeymoon of AFL and CIO is over. The adjustments to wedded life aren't being made smoothly.

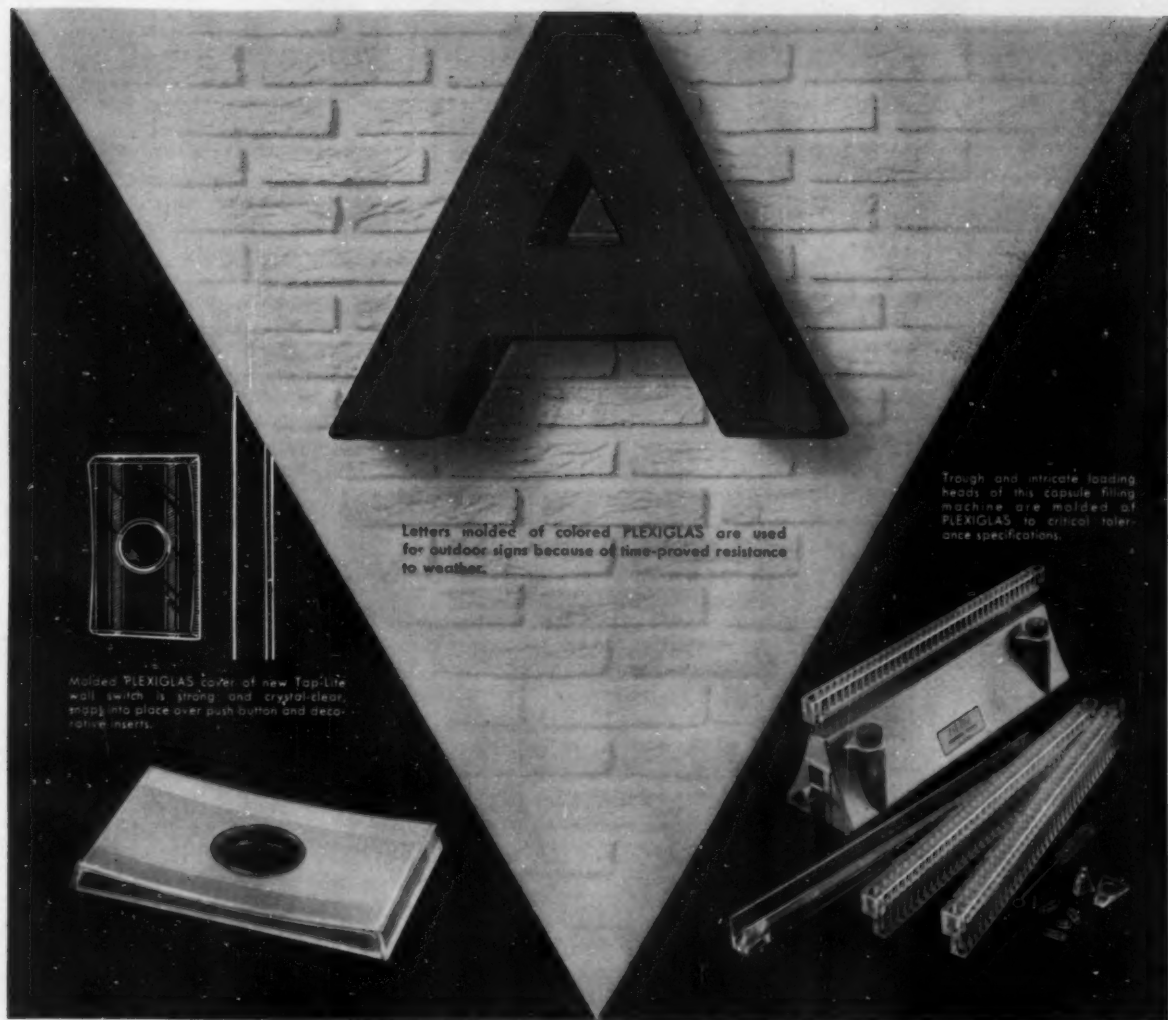
When the council meets on Tuesday, it will have to deal with:

- Dissatisfaction from former CIO unions over the federation's slow-moving programs on ethical practices and organizing. Walter Reuther needled federation leaders in recent major speeches, calling on them to "take the steps necessary to translate the resolutions of the [merger] convention into tangible and practical organizational activity."

- The role that AFL-CIO will take in the 1956 Presidential election. An influential small Republican-minded bloc opposes any endorsement. There is growing dissatisfaction over the southern Democrats' anti-integration position. So AFL-CIO might sit this one out.

- Disaffection in the building trades over AFL-CIO failure to settle jurisdictional problems. So far, 18 of 19 of the building trades unions have advised state affiliates to try to block mergers until job rows with industrial unions have all been ironed out.

- Centralized control over international unions. The degree of this control involves, most of all now, the Teamsters' insistence on the right to sign agreements with any unions outside AFL-CIO that have mutual interests with the truckers. However, other unions are siding with the Teamsters on what is turning into a "union autonomy" issue inside AFL-CIO. **END**



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See the Rohm & Haas Company exhibit at the National Plastics Exposition, New York Coliseum, June 11-15. Booths 419-31.



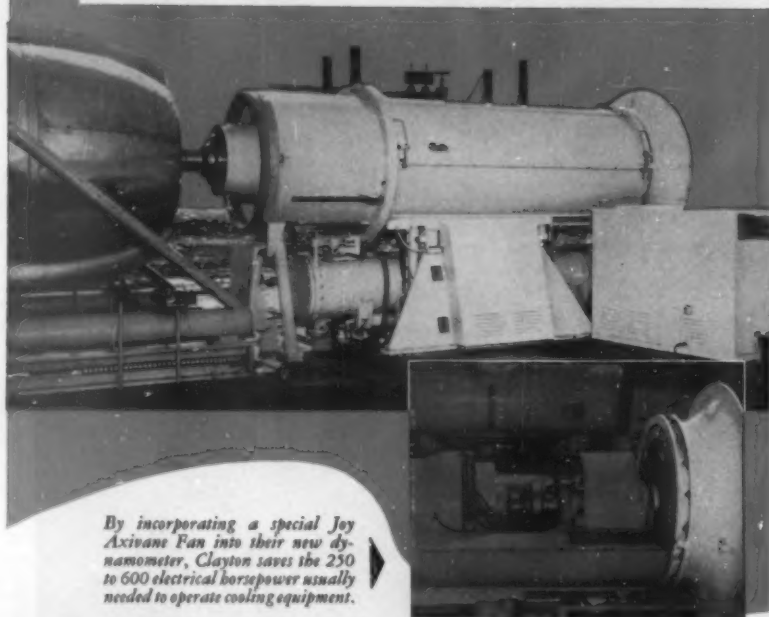
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New AIRCRAFT ENGINE TESTER USES

JOY AXIVANE FANS



By incorporating a special Joy Axivane Fan into their new dynamometer, Clayton saves the 250 to 600 electrical horsepower usually needed to operate cooling equipment.

Clayton Manufacturing Company, El Monte, California, utilizes a Joy Axivane Fan in their remarkable new aircraft engine dynamometer. The virtually noiseless testing device dispenses with the usual club propeller. Instead, the propeller shaft is attached to a "turbine absorber" which absorbs engine torque and measures performance.

An important integral part of the mechanism is the Joy Axivane Fan, which furnishes the air blast to cool the engine. This fan is actually driven by the engine being tested. It eliminates the need for the 250 to 600 electrical horsepower usually required to operate auxiliary fans to cool the engine.

The Clayton Dynamometer was developed for TWA. Four will be installed in test cells in addition to the one illustrated above. In addition, each of the new test cells will be equipped with two standard, roof-ventilating Joy Axivane Fans. • Joy Manufacturing Company, Oliver Building, Pittsburgh 22, Pa. In Canada: Joy Manufacturing Company (Canada) Limited, Galt, Ontario.



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Stuck in a Rut

Three softgoods unions organize intensively, but just manage to make new members balance withdrawals.

An "Operation Treadmill" by three major softgoods unions during the past several years points up labor's difficulty in expanding its ranks. Though the three unions organized thousands of workers, they find their total membership is still near or even below 1953 and 1954 levels.

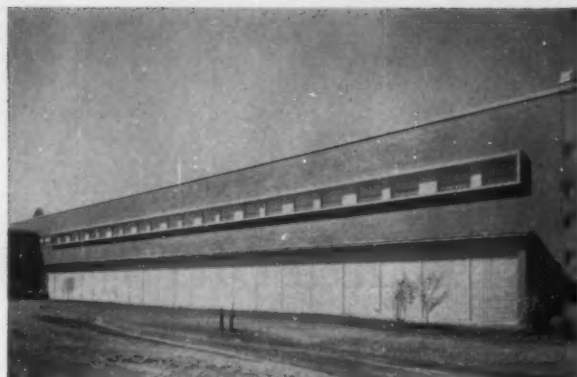
Their situation is not exceptional. For a number of years, organized labor's total membership has been on a plateau (BW—Nov. 19'55, p176). Annually, unions have made optimistic reports about new organizing, but additions to the ranks have been canceled out to a large extent by withdrawals.

• Cases—In the vulnerable softgoods unions:

- The International Ladies' Garment Workers' Union reports a membership of 445,000—up 14,000 in the past three years. To net this increase, ILGWU said, "more than 200,000 were initiated or reinstated to membership." But the garment workers' union has a high turnover because it is in an industry employing women predominantly. It lamented that "this huge number (200,000) has only barely covered the exits from membership due to deaths . . . and other causes," and said it has required "the most persistent organizing efforts merely to maintain our membership at an even level."

- The Textile Workers Union of America reports 285,000 workers under contract (of which it claims 200,000 are union members). But it said this total is 40,000 under 1954—even though organizers have brought 186 plants employing 25,000 workers under union contracts. TWUA blames "a shrinking industry and its increasing concentration in anti-union Southern states" for the failure to maintain past strength.

- The Amalgamated Clothing Workers of America reports a 400,000 membership, an increase of 19,000 since 1954. ACWA officers told convention delegates in Washington last week that "intensive organizing" had been necessary to make this gain. They blamed growing employer opposition, an "unfavorable" political situation in Washington and the South, and a shift in men's dress habits—from suits and dress shirts made in an almost completely organized portion of the men's wear industry to casual clothes produced in shops still largely unorganized. **END**



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PC Glass Blocks . . . cure-all for window area problems

There's no doubt about it . . . window areas in plants and buildings *can* cause all kinds of trouble. Usually, it's trouble that means expense. Take, for example, window areas enclosed with ordinary sash. Frequently they rot, rust, or buckle, causing trouble that can add up to big maintenance charges in repair and repainting. And then there's window breakage and window shades. More bills and expense. When putty loosens and caulking pulls away, dirt gets in, and with it come air leaks that throw an extra load on heating and cooling systems. This, and the recurring chore of window washing also cost money.

Seems almost too good to be true . . . but PC Glass

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In new buildings, or old, PC Glass Blocks can solve *your* window area problems. For more information, see us in Sweet's, or write Pittsburgh Corning Corporation, Dept. G-266, One Gateway Center, Pittsburgh 22, Pa. In Canada: 57 Bloor Street West, Toronto, Ontario.

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Westinghouse Way

Westinghouse Broadcasting Co. did itself proud during the past year in the area of educational programming, as it set about developing new patterns for all multiple-station owners and operators, at the same time injecting a high calibre of showmanship into public service broadcasting. It can be proud of its record, to wit: Its Bergen Evans radio series; its unique coverage of the White House Conference on Education in both radio and tv; its pioneering in the field of public education in mental health with its "Sing-Along for Mental Health" campaign; its Helen Parkhurst series.

Evans series was a compelling one, built around WBC conviction that there's a large and growing audience in AM for solid intellectual fare, if brightly and sprightly done. However, the major project on which WBC concentrated was the White House Conference on Education—and to increase the impact of the conference on a town, city and state level, and to create a favorable community climate for the big meeting itself, WBC launched one of the season's impressive series—"The Big R"—based on the six-point conference agenda. WBC as such was fully aware of its responsibility to aid the cause of better schools, better teaching—and went about it the right way.

Reprinted from *Variety*, April 18, 1956

- **Supplementary Unemployment Benefits will start for laid-off auto workers next week in 17 states.**
- **About 10,000 of the industry's 200,000 idle can now file valid claims under most of 232 auto plans.**
- **Actual payments begin in about 3 weeks, will last probably a month, average around \$10.**
- **Long delays, red tape, and small SUB amounts may cause grumbling in auto union, will build up pressure for "improvements"**
- **The big thing to keep in mind is that, to unions, SUB today is just the first step on a long road.**
- **The goal for the future is bigger benefits paid over a longer period, eventually a true guaranteed annual wage.**

The 5-Year Cycle of Auto Employment:
Shifting in a range of over 300,000

A Tough First Test for SUB

Next Monday morning, John Doe, unemployed auto worker, will make his familiar trek to the state office where he collects an unemployment compensation check. With that in his pocket, he'll head back to his old workplace. And then, all of a sudden, he'll become a guinea pig. He'll move into the trackless area of Supplementary Unemployment Benefits.

If he's bewildered by what he finds there, so are the people who are running the experiment. Where SUB will lead, nobody knows. But one thing is sure: It's no Utopia.

• **Disillusions**—John Doe is one of the lucky ones in a group of 200,000 laid-off auto workers. There are perhaps another 10,000 like him. The rest aren't eligible for anything except complete

disillusion, having been laid off before May 1. After all the queues and forms, they'll find that SUB has nothing for them.

John, if he's about average for the eligibles, will get the first of four checks about three weeks from now for around \$10. Lucky or not, he'd be only human if he wonders, after all he'll have to go through for such a meager harvest, "What was all that screaming about last year?"

The screaming was about his union's demand for the guaranteed annual wage, stoutly resisted by his employer, and opposed by virtually all of American industry. Out of that clash came the compromise idea of SUB. To John, it may not be worth the trouble then or the red tape now. But, like every guinea

pig, he's part of something much bigger.

There's a determined labor push on for income guarantees or job security. And SUB is labor's first step down this long road. There isn't much hazard in forecasting that this issue will be major in American industry's employee relations for the next decade.

• **Current Status**—The United Auto Workers now has 1,002,098 workers under SUB plans in 232 companies—auto, aircraft, farm equipment, etc.—some with as few as 2,000 employees. And SUB has penetrated the glass industry (some 27,500 workers), the electrical industry (about 20,000 workers), the can manufacturers (35,000) and a scattering of plants in other industries.

There are many variations of SUB—

the way the money is accounted for, the size of the payments, how long they continue. But the principle repeated again and again by UAW is unchanged: to give a laid-off worker more purchasing power; to make it expensive for his employer to lay him off.

Current estimates give you an idea of whether those objectives have been realized in the auto industry. The plan has cost General Motors about \$40-million, Ford \$12-million, Chrysler less than \$10-million. Trust funds created by the plans have had a year to build up (nine months in the case of Chrysler). The workers have had a year to build up credits against those funds.

I. How SUB Is Built

The auto SUB plan provides that a laid-off worker can get as much as 65% of his after-tax earnings for the first four weeks of layoff, and 60% for a further 22 weeks—giving him 26 weeks of potential benefits in all. However, he cannot draw more than \$25 a week. His actual SUB benefit would be the difference between unemployment compensation, plus any other compensation, and 65% or 60% of his after-tax pay.

To be eligible for SUB he must (1) be eligible also for a state UC benefit, (2) have at least one year's seniority, and (3) have had a "waiting week" (the first week of layoff). The number of weeks he can draw benefits is determined by the number of "credit units" he has earned, and the size of the trust fund.

A worker surrenders credit units for each weekly benefit he draws. The number of units he gives up depends on his seniority and on the size of the trust fund. But it's the latter—the trust fund's position—that's the major key to how long a worker can continue to get SUBBenefits (chart, page 58).

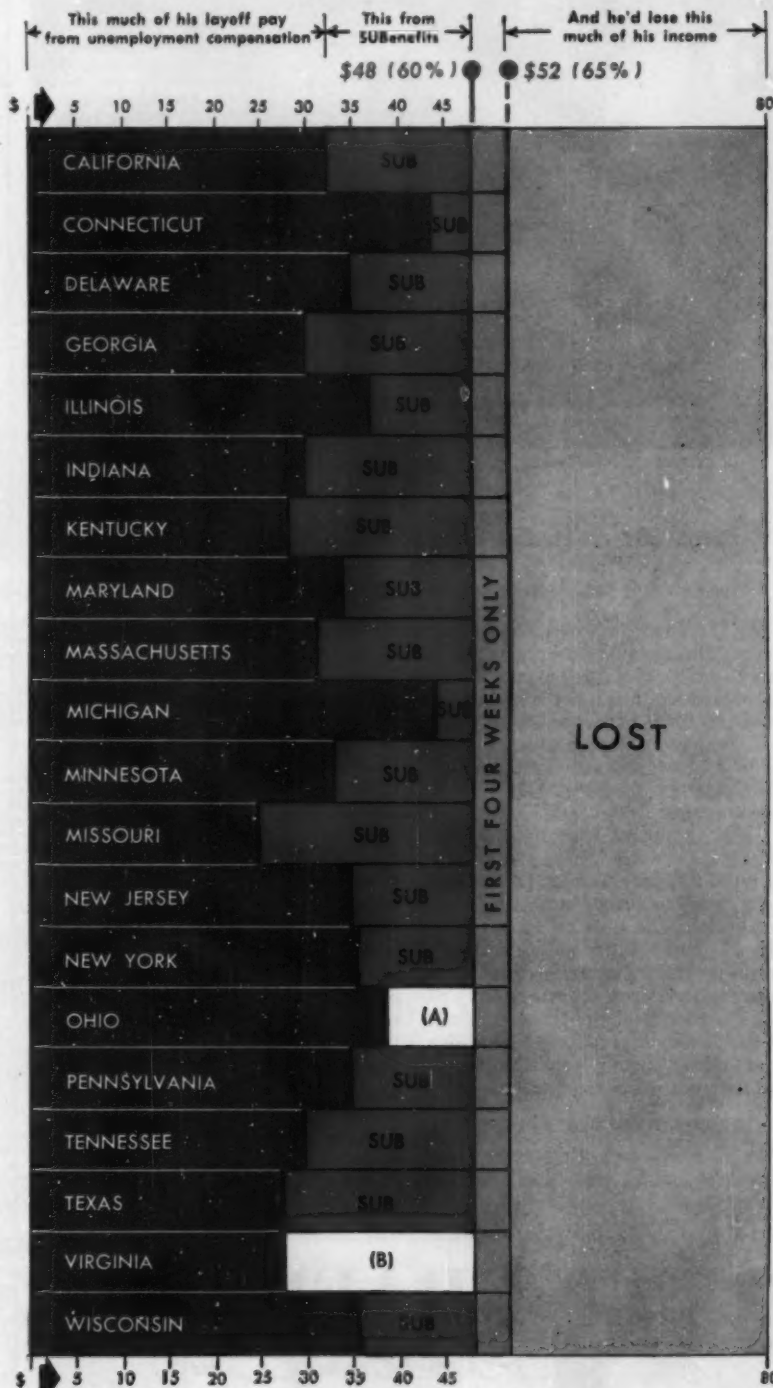
• **Where Credit Goes**—You have to balance the scale of credit units surrendered against units earned since the agreements were signed. A worker with less than 10 years' seniority earns $\frac{1}{2}$ credit unit for each week he actually works between June 1, 1955, and May 31, 1957. During the same period, a man with more than 10 years' seniority earns $\frac{1}{2}$ credit unit for each week he works. After June 1, 1957, all workers receive $\frac{1}{2}$ credit for each week they work.

At GM and Ford, a man with between one and 10 years' seniority will have earned 13 credit units if he has been continuously employed since June, 1955; a man with more than 10 years' service, 26 credit units.

At Chrysler, the man with from one to 10 years' seniority will have earned 9.75 credit units if he has been con-

How States and Employers Will Share in Layoff Pay

An average auto worker (with a wife and two children) earning \$80 takehome pay would get:



(A) SUB deductible from UC, alternate method may be used.
(B) No SUB, in any form, allowed without forfeiture of UC.

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HOLLYMATIC CORPORATION'S

Entire Sales Force Uses *Graphic 35's*



▲ Stan Henshaw of Hollymatic edges his way to a good shooting position for a Graphic 35 shot of his company's steak and patty molding machine. Push-Button Focusing and color-calibrated flash settings make picture-taking easy, simple and sure.

This Graphic 35 shot shows prospects clearly how machine produces patties of constant size and shape with inserts of wax, paper between them.



find them ideal for "visual testimonials"

The Hollymatic Corporation of Chicago, Ill., manufacturer of a steak and patty molding machine for processors of meat, made it easy for its sales force to picture its products in use, and thereby increased the sale of its products through what Hollymatic executives call "visual testimonials."

The company recently outfitted its entire sales force with new Graphic 35 mm. cameras. Salesmen use them to record noteworthy installations and uses of the machine in all parts of the country. These cameras were chosen because their easy push-button focusing, coupled rangefinder, and Spectramatic flash settings simplify exposure decisions and allow anyone to make exceptional pictures indoors or out.

CAMERAS SOLVED PROBLEMS

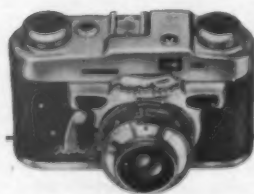
Mr. E. A. Harwell, Hollymatic sales manager, states that many selling

problems were eliminated with Graphic 35 pictures.

Regional managers use the Graphic 35 to take color shots of installations. Processed as slides, with suitable captions, the salesmen call with compact desk viewers in which carefully selected slides are shown the prospect. Salesmen can now interest a prospect to arrange a demonstration, no longer have to handle a heavy machine, and are always able to make a dignified and convincing sales presentation.

Hollymatic men can tell a prospect: "This is the way another company is successfully handling the same problem"—and actually show them. We call it the "visual testimonial," and it really works.

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"... the company pays 5¢ for each hour each of its covered employees works into a trust fund..."

SUB starts on p. 54

tinuously employed since Sept. 1, 1955; the man with more than 10 years, 19.5 credit units. But, if a Chrysler worker exhausts his credit units while he's still on layoff, he will continue to receive benefits for an additional period as if he had been earning credit units between June and September, 1955—the period in which GM and Ford workers were piling up credits, but Chrysler people still were under their former contract.

• **Cash in the Pocket**—The complicated arithmetic boils down to this: Most of the unemployed workers have less than 10 years' seniority, so they have a maximum of 13 credit units. A one-to-five-year man can get SUBenefits for not quite four weeks. A five-to-10-year man can get SUBenefits for slightly more than five weeks. In most cases, the SUBenefit (plus UC and other compensation) would be 65% of after-tax pay, because a man with one to five years' seniority would exhaust his credit units before he ever got beyond the four-week "special benefit" period.

The company pays 5¢ for each hour each of its covered employees works into a trust fund that is set to reach a specified maximum level. For example, as of June 1, 1955, Ford set a maximum of \$55-million—about \$398 for each employee. This was the maximum funding for that month, the figure that actuaries believed would cover layoff benefits.

Each month a new maximum funding amount is determined in this way:

$$\frac{\text{Current employment}}{\text{employment on June 1, 1955}} \times \$55\text{-million}$$

But the maximum fund is an ideal; a figure that won't be reached through the life of the contract. What counts is how much money is in the fund at any one time. This is the "trust fund position," and it's a percentage of each month's maximum funding amount. If the fund ever were to attain maximum size, the company could discontinue payments into it until it again fell below the maximum.

• **How Ford Planned**—The entire plan was formulated by Ford financial and legal experts with three conditions paramount: (1) Limit the liability. (Even if worst came to worst, and the fund was exhausted, Ford would not be liable for continuing benefits.) (2) Make the cost predictable. (As long as the present contract is in force it will cost

Backbone for any job . . .

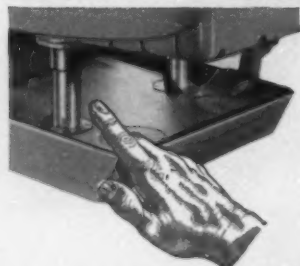
"Solid-Back" Column



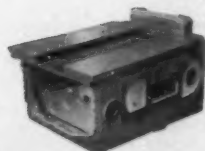
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... New Kearney & Trecker **TF** Series milling machines have it... backbone for the precise tool room job and... "plenty of beef" for rugged duty milling

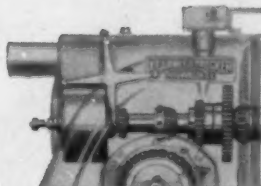
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Ford only 5¢ an hour, even if the fund goes bust.) (3) Tie in the plan with state unemployment compensation systems. It is the latter condition that has kept SUB's status cloudy. The agreement says the plan goes into effect only if states in which the company employs two-thirds of its workers agree by June 1, 1957, that a worker can get SUB as well as UC.

Meeting that requirement was easy for Chrysler; more than 75% of its hourly workers are in Michigan, and that state's attorney general ruled last summer that SUB and UC are compatible.

But it has been touch-and-go for Ford and GM. And even while the plans at both companies are assumed to be effective, some of the legal talent would argue the point because the administrative rulings O.K.'ing the plan are under attack in certain states.

For practical purposes, however, nearly all of the 232 plans signed by employers and UAW were effective on June 1. Favorable rulings on integration of SUB and UC have been obtained in: Arkansas, California, Connecticut, Delaware, Florida, Georgia, Illinois, Kentucky, Maryland, Massachusetts, Michigan, Minnesota, Missouri, New Jersey, New York, Pennsylvania, and Washington.

Three states haven't O.K.'d integration—Virginia, Indiana, and Ohio. In Ohio, the decision isn't final; either the attorney general or the legislature could approve SUB. UAW and the auto companies have agreed to a substitute plan if a state doesn't approve SUB. Their plan apparently will work in Ohio. A worker could collect UC for two or three weeks, then the third or fourth week, not apply for UC but take, instead, three, or four, weeks SUB in a lump sum, surrendering three or four weeks' credit units. It's doubtful whether even this method of payment is now legal in Virginia without the worker having whatever he receives in SUB deducted from his UC payments.

But the auto industry's plans do seem firmly set into a worker's future.

The big difficulty with SUB, in this first summer of its life, is that it is not even half a loaf—and no one knows for sure how far even this meager portion must be split.

II. Sharing It Out

When you talk about SUBenefits this summer you are talking about the plans at General Motors, Ford, and Chrysler. American Motors Corp. does not start contributing to the fund until September. Studebaker-Packard's plan is not effective yet; neither is the glass industry plan. The can companies' employment is fairly stable. Here are the figures you have to work with in trying

to determine how much SUB will provide and for how long:

General Motors: UAW hourly employment, 340,000 (375,000 a year ago); maximum fund, \$136-million (set at \$150-million a year ago); trust fund position, about \$40-million or 29%.

Ford: Hourly employment approximately 127,000 (140,000 a year ago); maximum fund, \$50.5-million (set at \$55-million a year ago); trust fund position, about 12-million or 24%.

Chrysler: UAW hourly employment approximately 98,000 (about 135,000 a year ago); maximum fund about \$40-million (set at \$49-million a year ago); trust fund position, something less than \$10-million or less than 25%.

Neither company nor union experts have firm estimates of the average SUBenefit. You hear guesses ranging downward from \$15. If there is a consensus, it would be at less than \$10. John Doe is going to be disappointed. He and management will have to remember what went into the making of SUB.

III. How SUB Was Born

This mid-century version of direct employer aid to laid-off workers was born a year ago next Wednesday when, after more than 24 grueling hours of bargaining, a gleeful Walter Reuther, followed by a weary John Bugas, bounced out of a fourth-floor room in Detroit's Leland Hotel shouting, "Boys we've got a deal."

But it wasn't the deal Reuther

sought. Then, and since, Reuther described the Ford SUB plan as a start toward UAW's goal. If you put what UAW wanted beside what it got, there are major disparities. UAW's guaranteed wage plan had two parts:

- Every worker laid off without advance notice would get 40 hours' pay. Estimated to cost an unpredictable, out-of-pocket 8¢ an hour, this demand sank without a trace in bargaining.

- A trust fund, estimated to cost 8¢ an hour, would be created by employers. From it, workers with at least two years' seniority would get 80% of take-home pay, less UC payments, for up to 52 weeks during layoffs. They would build up a week's layoff credit for each two weeks they worked. This part resembles the plan adopted.

- **Two Schemes**—UAW had one overriding aim in last year's Ford and GM negotiations: to get a guaranteed annual wage.

To the union, GAW meant 52 weeks' pay each year to workers with at least two years' seniority. UAW's underlying aim was to penalize a company for not stabilizing production and thus avoiding layoffs (chart, page 54).

As early as 1952, Ford attorneys and analysts also had begun studying all forms of unemployment compensation. By January, 1955, their ideas jelled, and the task of shaping them up fell on Richard Johnson of the finance staff, chief architect of the plan; Malcolm L. Denise, now general industrial relations manager; and Karlton W. Pierce, man-

How SUB Is "Banked"

The length of time a worker can draw SUB depends on his seniority and the amount of money in the fund. Here is how it is figured:

TRUST FUND LEVEL (Per cent of maximum (1))	SENIORITY OF WORKER					
	1-5 Years	5-10 Years	10-15 Years	15-20 Years	20-25 Years	25 Years and Over
CREDIT UNITS SURRENDERED EACH WEEK OF SUB (Maximum number of credits held by any worker: 26)						
85% or over	1.00	1.00	1.00	1.00	1.00	1.00
76%-84.99%	1.11	1.00	1.00	1.00	1.00	1.00
67%-75.99%	1.25	1.11	1.00	1.00	1.00	1.00
58%-66.99%	1.43	1.25	1.11	1.00	1.00	1.00
49%-57.99%	1.67	1.43	1.25	1.11	1.00	1.00
40%-48.99%	2.00	1.67	1.43	1.25	1.11	1.00
31%-39.99%	2.50	2.00	1.67	1.43	1.25	1.11
22%-30.99%	3.33	2.50	2.00	1.67	1.43	1.25
13%-21.99%	5.00	3.33	2.50	2.00	1.67	1.43
4%-12.99%	10.00	5.00	3.33	2.50	2.00	1.67
Under 4%	No Benefits Payable					

(1) Maximum being company ceiling obligation

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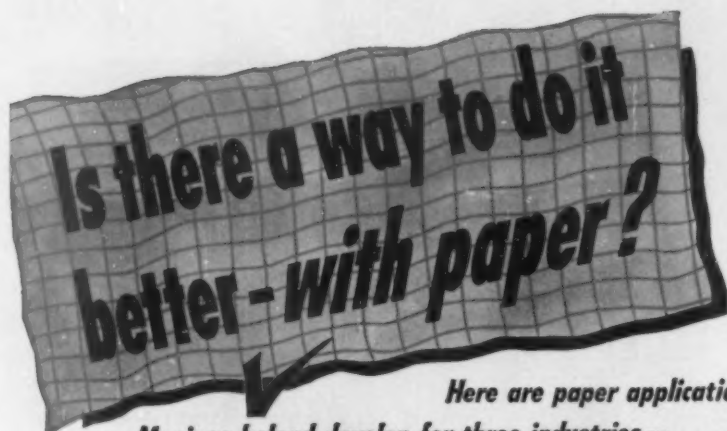


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ager of the industrial relations analysis department (picture, page 67).

Their plan was never fully drafted, and it was shelved when Ford decided to try a new bargaining tactic.

• **Around the Table**—In the negotiations, Ford's first offer on economic matters was a copy of GM's stock-savings-loan plan, called "Partnership in Prosperity Plan" (PIPP) at Ford. It came as a crushing shock to UAW negotiators who had sensed from questions asked by the Ford side that the company had in mind, if not on paper, a GAW-type plan.

Ford bargainers now say PIPP was good strategy; it took negotiations right down to the strike wire before UAW saw a plan—the SUB plan—it could accept as close to GAW. When Reuther tagged SUB as "the principle of the guaranteed annual wage," it was too late for the union to back away.

There's some difference of opinion over whether UAW attained its goal of stabilizing employment. The answers hinge on predictability. To provide stable employment, a plan must have unpredictable costs. UAW says its GAW approach combined limited liability with unpredictable costs and that the Ford plan meets those tests. Ford's objective was limited liability and predictable costs; Ford people say SUB has both. The plans' company authors explain stoutly, "The nickel-an-hour cost is no different than any other nickel-an-hour increase."

• **How They See It**—Drains on the fund caused by layoffs penalize the company for faulty scheduling, since they make it harder for the fund to reach the point at which the company can cease contributing. That's "unpredictable" enough for UAW. But even if the fund paid out nothing, it couldn't reach maximum size before the contract expires in 1958. So the company is committed for 5¢-an-hour for the next two years. That's "predictable" enough for Ford.

The Ford plan is not the ultimate in SUB. UAW has some clear-cut goals for building on the Ford plan. To come to grips with the most important of these, you have to know how the companies are proposing to administer the present plans.

IV. How They'll Collect

If John Doe does feel bewildered next week as he goes through SUB procedures (page 67) he will have a lot of company among the men on the other side of the desk.

The reason for all the bewilderment is that a volume demand for SUBenefits is coming too soon. When the contracts were signed a year ago, it was logically anticipated that the first heavy layoffs would come in late summer of

"... you can see the differing philosophies in requirements for applying for an SUBenefit ..."

SUB starts on p. 54

1956 as the auto companies went into model change-over. So the plan would go into effect in June and give the companies two full months to perfect their procedures with the few unemployed workers who were expected to apply. Instead, the administration of the plan is still being worked out as thousands of workers are waiting for their money.

Workers laid off in May will already have had their "waiting week," and they'll be eligible for SUBenefits next week. That's what puts the pressure on.

• **Experts' Touch**—The SUB plan, which stands almost word-for-word in Ford, GM, and Chrysler contracts, was written primarily by Ford's legal and economic specialists, with an assist from union experts (picture, page 67). Their intent was to leave little room for argument over interpretation, and to avoid the necessity for large administrative staffs. There's one problem with that approach: The result of trying to be specific and to anticipate every possible contingency is complexity.

There are, for example, several different ways in which "work week" can be determined. There are obscurities. One company labor relations man called UAW for an explanation of one of these. The union had no clarification, but said it would call Ford and ask the man who wrote that particular part. After a while a union man called back with the plaintive apology: "Ford can't find the guy who wrote it."

Since it's their plan, the Ford people are the only ones taking liberties with it. GM and Chrysler are sticking to the letter even though, as far as some at GM are concerned, there must be an easier way for the worker to get his money. You can see the differing philosophies in the requirements for applying for an SUBenefit.

• **Applying**—The language calls for an unemployed worker to report in person to the plant where he worked, and bring his state unemployment compensation check the same week he gets it. That is what GM is requiring its workers to do. At Ford, the man must report within two days after he receives his UC check. At Chrysler, he must report in the week ending Friday, unless he gets his UC check on Thursday or Friday, in which case he has until the following Monday or Tuesday to apply for SUB.

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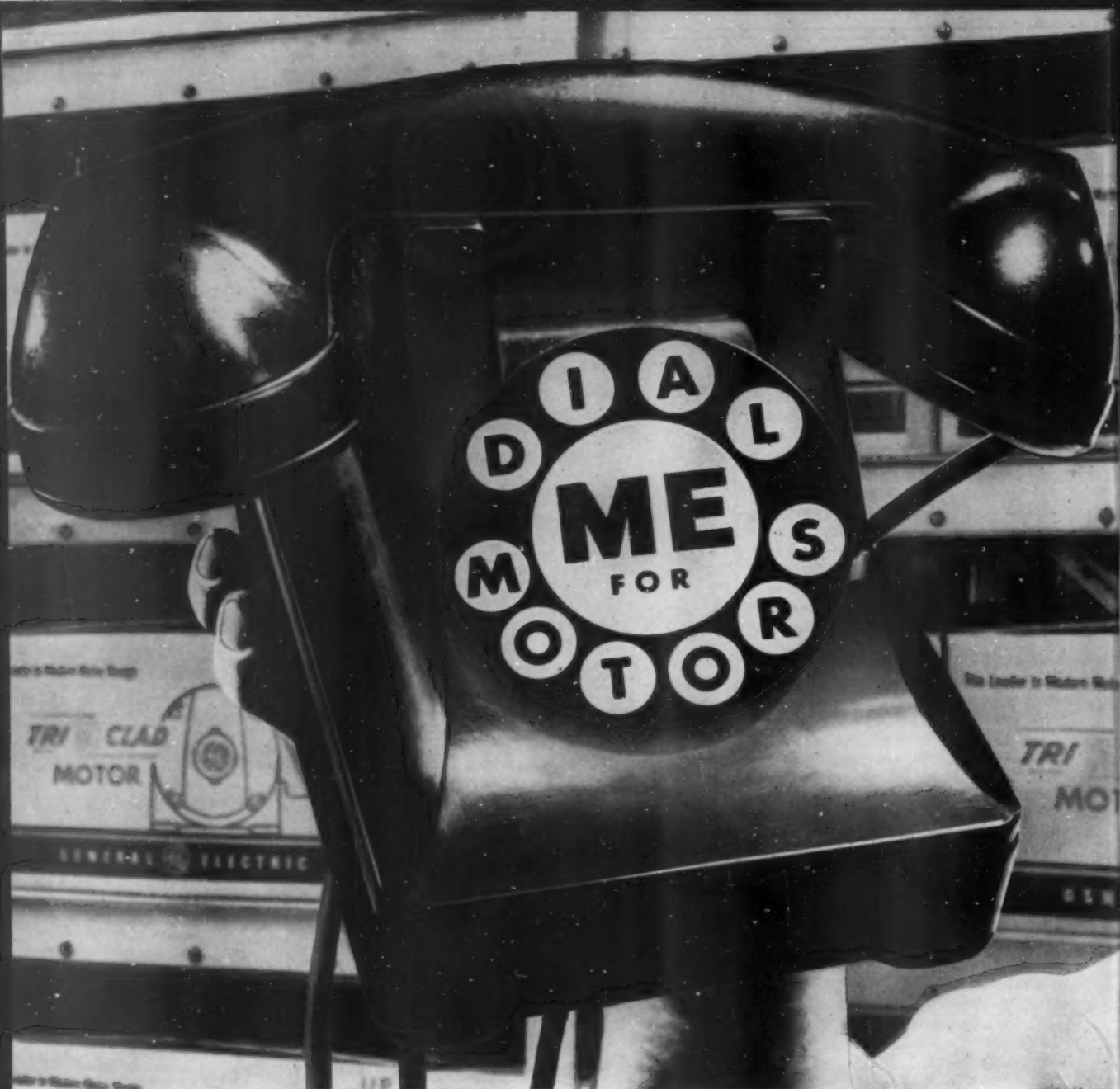
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E. J. Read, Olympia 6-6651
General Elec. Supply Co.
Cliff Clark, Wilmington 3-5561

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Turner Elec. Works
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GENERAL  ELECTRIC

"SHELF" DELIVERY OF G-E MOTORS 5 TO 20 HP

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Thropp Elec. Sales Corp.
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Electric Service, Inc.
2-9447
General Elec. Supply Corp.
2-5246

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Havens Electric Co., Inc.
4-1201

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Graybar Electric Co., Inc.
Lou Pfeffer, WA-3700

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Apparatus Distributor, Inc.
Len Keller, UL 2-4000

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Le Valley McLeod, Inc.
John F. Decker, 6163

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Glens Falls Electric Supply Co., Inc.
2-5868

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Central Queens Elec. Supply Corp.
Charles Wolmer, RE 9-2020

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Motors & Armatures, Inc.
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W. W. Granger, Inc.
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Howard K. Phillips, 8000

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GL-0070

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HA-9840

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John F. Alexander, 3-8207

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MA 1-0600

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General Elec. Supply Co.
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Graybar Electric Co., Inc.
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Strong, Carlisle & Hammond Co.
Jim Simmons, TO 1-8800



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The Loeb Electric Co.
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MI 0781
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MI 5665

HAMILTON

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TW 4-8125

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Graybar Elec. Co., Inc.
George Rowlands, Riverside 4-0124

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I. V. Owen Co.
Ronald Owen, 72

OKLAHOMA CITY

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General Electric Supply Co.
F. G. Ross, DI 3-6121
Graybar Elec. Co.
Ray Downing, MA 6-2121

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Ozka Ind. Elec. Supply Co.
Jim Embach, 287

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COOS BAY
Marshallfield Elec. Co.
U. E. Richter, Congress 7-6319

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R. E. Yates, Diamond 5-0373

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Klamath Mach. Co.
H. Ellis, 2-2588

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R. S. Rix, 2-7181
General Elec. Supply Co.
P. Jorgenson, 3-4519

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General Elec. Supply Co.
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Graybar Elec. Co., Inc.
CA 7-6641
Halt & O'Donnell
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Allen Elec. Co.
L. Brown, HE 5-9515
General Electric Supply Co.
Bob Harte, Hemlock 3-5206

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Bovard & Co.
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Don Lehr, 4911

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Max Evans, 4-3351

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Middle Tenn. Armature Wks.
R. Cleveland, EV 8-3672

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Graybar Elec. Co., Inc.
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Tri-State Armature & Elec. Wks.
W. W. Bumpus, JA 7-8414

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Nashville Armature Co.
Alpine 6-2546

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B. D. Garrett, DR 6-7254
Graybar Electric Co., Inc.
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Arlan Young, 4-6435

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Ernest B. Williamson, TU 2-8891

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W. D. Clarke, TU 2-9237
Graybar Elec. Co., Inc.
M. J. Smith, TU 4-6374

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Graybar Elec. Co., Inc.

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W. M. Smith Elec. Co.
Gene Jackson, Hamilton 8-4606

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Graybar Elec. Co., Inc.
H. Chaparro, 3-7561

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Graybar Elec. Co., Inc.
Bill Hart, ED 5-4523

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Chuck Sonny, or Andy, CA 8-4431

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Graybar Elec. Co., Inc.
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Oliver Armature Works

Thurman Tedder, CA 2-9271

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Allen Pistole, PO 3-8271

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GENERAL ELECTRIC

"OFF-THE-SHELF" DELIVERY OF G-E MOTORS 5 TO 20 HP

(Continued from preceding page)

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Wesley Adams, MU 4-3501

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S. V. Patrick, CA 5-1651
General Elec. Supply Co.
J. A. Russell, CA 7-1261

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B. A. Hamilton, 2-1674

WACO

General Elec. Supply Co.
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Elec. Motor Co.
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EM 3-3911
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Elgin 9-8771
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DA 2-5886

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Electrical Equip. Co.
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Graybar Elec. Co., Inc.
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Beemster Elec. Co.
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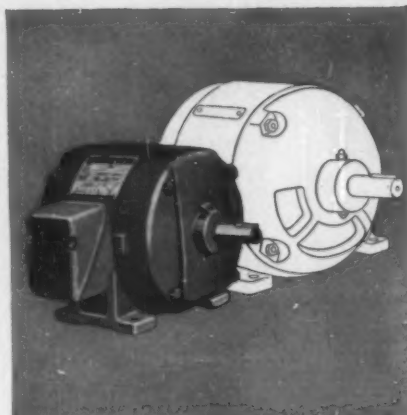
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HONOLULU

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Excess bulk has been trimmed and all wasted space eliminated from TRI-CLAD '55' Motors. Some are up to one-third more compact!



ONE THAT WATER WON'T FAZE? . . .

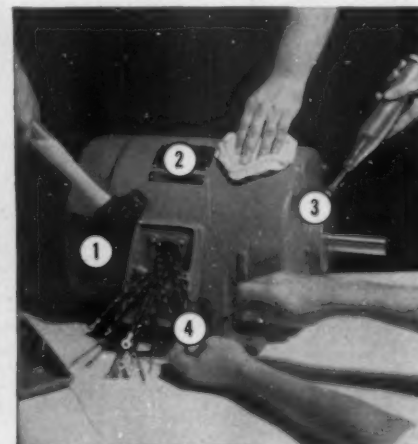
New miracle materials in the TRI-CLAD '55' insulation system make it shed water like a duck's back!



AND 60% GREATER PROTECTION? . . .

New enclosure on the TRI-CLAD* '55' (above) guards it against dirt, dust and moisture far better than old-style motors!

*Registered trademark of General Electric Co.



WITH MUCH EASIER MAINTENANCE? . . .

(1) Man-size knock-off lugs, (2) stainless steel nameplate, (3) provision for regreasing on the job, (4) permanently numbered leads.

For more information on the new, fast-service plan—and "special"
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Progress Is Our Most Important Product

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THEY DREAMED UP SUB: Ford analysts Karlton Pierce (left), Malcolm Denise (center), and Richard Johnson.



THEY BOUGHT SUB, after modifications: UAW research chief Nat Weinberg (left), and UAW Pres. Walter Reuther.

down as his "highest straighttime hourly earnings" in the last week during which he worked. At GM, the form is more complicated; he may have to get help from his union in filling it out. GM will fill in his pay from its records. At Chrysler, the form is simple and he leaves it there. American Motors and the union agreed on a "one-stop" procedure whereby the worker could apply for SUB at the same place he gets his UC check. But the U.S. Bureau of Employment Security has just about ruled out that scheme.

- **Collecting**—At Ford, a worker applies in his second week of layoff and will pick up his SUB check perhaps two weeks later. At GM, he appears at the plant in his first week (the "waiting week") of layoff, picks up the application form, and a week later he files his first application and picks up the application for his second benefit week. In the third week of layoff it is likely his first SUB check will be ready when he appears to pick up the application for the third benefit week. He could still be collecting benefit checks after he is back at work. At Chrysler, the man appears, with his UC check; in his second week of layoff, files for SUBenefits and gets his SUB check in the mail about two weeks later.

Some, on both sides, are unhappy with this reporting procedure. A man, who lives in the middle of Detroit, works at an auto plant far out in the suburbs, may get \$5 week in SUBenefits—and so he'll use much of the money traveling back and forth to apply for benefits.

Making the man bring his UC check with him doesn't seem as happy an idea now as when it was written into the plan. Management men are inclined to feel that the man has enough money laid by to hold his UC check another day or so, but union people see this proviso as creating a hardship for some.

- **Operating Costs**—Except at Ford,

where the plan originated, labor relations management is not pleased at the additional administrative load SUB throws on a company. First is the burden of explaining what the plan is all about. The companies have had to add anywhere from three to six people in their personnel departments just to keep SUB records.

The companies do have the right to collect from the fund what money it costs them to administer SUB. But it's unlikely any of the companies will use this proviso—they don't want to risk setting up a bad reaction among disappointed SUB recipients.

- **Appeals**—The administrative boards set up under the plan—three each from company and union—are to handle only appeals. Each board is supposed to select an impartial chairman who would be the only paid board member. The companies see no reason to appoint chairmen until the boards have some appeals to be handled and the members can't reach a decision—which is the only time the chairmen vote.

Some on the union side think this is a mistake. They cite the flood of precedent-setting appeals in the early days of pensions. They think the same thing will occur with SUB—a significant view inasmuch as any worker who appeals undoubtedly will have been inspired by the union.

V. What It Can Bring

Chances are that most of the appeals will involve eligibility. UAW people think that eligibility requirements for state unemployment compensation are far too rigid—and SUBenefits depend on UC. So, through the medium of appeals, you can expect UAW to try to rewrite the eligibility requirements of SUB.

- **Way for Changes**—Challenging the company's determination of eligibility apparently is the only way UAW has a chance to make any changes in the

Ford-GM-Chrysler SUB plans before 1958.

The SUB contracts say: "During the terms of this agreement, neither the corporation nor the union shall request any changes in, deletion from, or addition to the plan, or this agreement; or be required to bargain with respect to any provision or interpretation of the plan or this agreement. . . ."

How firm is that language against reopening? "Damn firm" growls one industrial relations director. Other management takes the same tack. And at UAW, a high-level spokesman says, "We agreed to the language; we know what it says."

- **In the Wind**—But against those assurances you have to weigh UAW's critical view of the eligibility requirements. Here's why they are so important:

A worker cannot get SUBenefits unless he is eligible for UC.

Many states apply the "experience rating" system to their UC tax system—a company's UC tax diminishes as UC payments to its laid-off workers diminish. The theory is that the better the employment record, the lower the tax will be.

But, says UAW, the experience rating device does not stabilize employment; it merely makes a company more eager to challenge jobless payments. Furthermore, the union adds, industry uses its influence in state legislatures to throw up more and more disqualifying fences.

So, the union insists, SUB contracts must allow for independent determination of eligibility. The politically astute UAW realizes that if it ever gets independent determination in the contract, the experience rating system will be dropped or will revert to its original purpose, because it would then be to an employer's advantage to let the laid-off worker get a high UC payment, reducing the drain on the SUB fund and bringing nearer the day when the com-

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—to feel how every finger (of either hand) falls into natural, easy working position ... how the over-size, plainly labeled control keys give direct "live" response ... how Totals and Sub-totals are obtained instantly by depressing bars, with no space strokes required. This is the first adding machine to fit the human hand—the first new keyboard granted a patent in years!

Actual items you enter on keyboard appear in this Check Window before they are printed or added. For the first time on an American 10-key machine you see what you're adding —so you can work quickly and accurately. Note, too, how Clear Signal prints automatically on tape with the first item following a total... also how True Credit Balance prints without extra motor operations or pre-setting!

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THE COMPUTYPER • THE ADD-PUNCH MACHINE

"... the future of SUB in autos and other industries will be guided by what John Doe thinks of it ..."

SUB starts on p. 54

pany could discontinue fund payments. There's a widely held view that it is cheaper for employers, even under an experience rating system, to pay jobless benefits through the unemployment compensation system than through SUB.

And if it once wins easing of eligibility requirements, the union thinks, it will be easier to persuade state legislatures to raise the level and duration of UC payments. This reasoning stems not alone from the eligibility factor, but from its link to the fact the higher the state payment, the lower the SUBenefit and the lower the drain is on the fund.

In the bargaining, in addition to independent eligibility determination, UAW will also be after higher benefits for a longer period of time. The proposal may even be 100% of after-tax pay, but the union probably would settle for 75% or 80%. And if it can do no more, it will try to keep the level at 65% for the duration of the layoff.

UAW's long-range goal on duration is, of course, 52 weeks. But its first step toward that figure likely would be 35 weeks. Both the level and duration demands naturally will have to be based on the experience between now and 1958—how much the funds are drained, and how adequate the 5¢ an hour is in building the funds. The plan as it stands now has an adjustment feature for June, 1958.

If the average SUBenefit in 1957 is high—between \$20 and \$25—the system will work just as now. But if the average benefit in that year is, say, \$10 or \$14.99, the "adjusted maximum funding" for June, 1958, will be only 60% of the actual maximum funding. You can see what happens in that case. The trust fund position, which then would be a percentage of the adjusted funding, shoots up; workers have to surrender fewer credit units for each benefit and so can draw benefits for a longer period of time.

But, in the final analysis, the future of SUB and its role in 1958 bargaining in autos and in future bargaining in other industries will be guided by how John Doe benefits from it and what he thinks of it. Will he clamor for more? Will he feel it isn't worth the trouble? On answers to those questions depends the weight of pressure that management will be feeling in the years ahead. **END**

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FINANCE

Ford Meets

THE PEOPLE pictured on these pages are a special group of stockholders on a very special occasion: Ford Motor Co.'s first annual meeting for public shareholders since 1918.

One day last week they came early to the shaded grounds of the Ford Rotunda in Dearborn, Mich. They registered 2,700 strong at booths set up in the sunshine. They strolled among the Rotunda's demonstrations of how a car is put together and what makes it run. They toured the Dearborn plant—their plant now.

They filed into the big tent (left) for the formal meeting, and afterward they shook hands with some of the Fords. Then the stockholders scattered to smaller tents to eat box lunches of fried chicken, rolls, potato chips, cupcakes, milk, and apples.

- **Chummy**—All rolled into one, it was a rally day at the fairgrounds, community picnic, a reception introducing the Ford family, Ford officials, and the rank-and-file stockholders to each other.

When the meeting broke up, the shareholders stampeded to get autographs from Pres. Henry Ford II, his brother Benson (brother William C. Ford, nursing an injured foot in a cast stayed in the background down among the audience), and Chmn. Ernest R. Breech. One professional stockholder said he hadn't seen anything like it since the annual meeting of a movie company—"and that was because Gary Cooper was there."

The meeting itself was friendly. Ford management found the experience of accounting to outsiders not so painful after all. As one executive said when it was all over: "It could have been worse—I had expected many more embarrassing questions."

- **Stock Price**—One question that was skirted is why the stock, which went on the market Jan. 18, has dropped about \$10 below its initial \$64.50. The closest approach came when Isadore Blau of Brooklyn, holding about 500 proxies, proposed a restriction on the executives' stock option plan.

Blau said some Ford officers took up options granted in 1953 and sold stock immediately after it went on public sale (BW—May 5 '56, p174), depressing its market price. He offered an amendment to require them to hold stock at least three years after acquiring it under the option plan.

Chmn. Breech pointed out that, under the present plan, optioned stock cannot be taken up for two years, and then only in annual installments of

the Public With No Pain



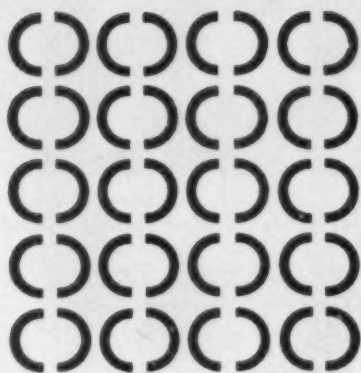
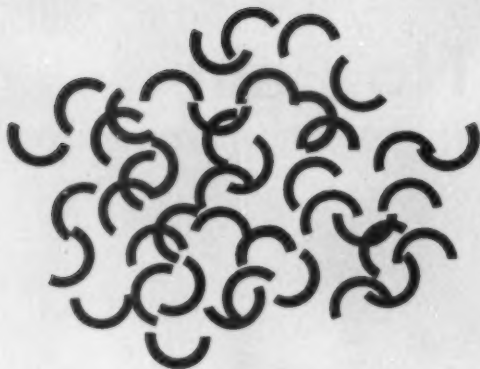
HENRY FORD II leaned down from the platform at close of the meeting to shake hands with many of his new fellow-shareholders.

STOCKHOLDERS had a chance to speak their piece in front of Board Chmn. Ernest R. Breech.



BOX LUNCHES featuring fried chicken were served in smaller tents near the main top.

PLANT TOUR took the stockholders through big Dearborn plant right to end of auto assembly line (left).



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WOMAN DRIVER practices on dummy power-steering panel.

20% or less. Blau's proposal was defeated by about 97% of the votes.

• **Words of Caution**—In his president's report, Henry Ford II didn't directly refer to the stock price drop, but he reminded his audience of his cautions prior to the public sale, such as "Some people are indulging in wishful thinking about their chances for fast and fabulous financial gains" and "I personally am reasonably sure 1956 will not be as good a year as 1955."

He added new warnings:

• Profits in the second and third quarters will be lower than last year's. Car sales will be less than 6-million for the industry this year.

• Plans to invest nearly \$1-billion in plant equipment in 1956 and 1957 will require "substantial retention of earnings" for new facilities that will have "an adverse effect on profits until they are in normal production."

• **The New Owners**—Ford disclosed officially for the first time that it has 319,006 shareholders. The company emphasized the success of getting the stock widely distributed. Only 1,658 own more than 300 shares, less than 16,000 own from 100 to 300 shares, and 301,411 holders own fewer than 100 shares. About 460 foundations and

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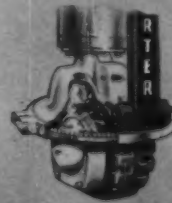
ALL NEW PALLET CHEK—Eliminates chamfering in most cases...prevents pushing pallet ahead of truck.



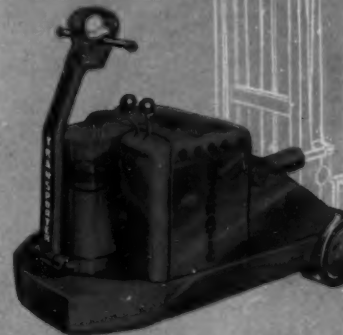
ALL NEW 3-SPEED BUTTERFLY CONTROL—Permits inching with smoothness and precision never before possible.



ALL NEW QUICK-OFF DRIVE WHEEL—Can be changed in as little as 3 minutes. Simply remove plate and 3 bolts.



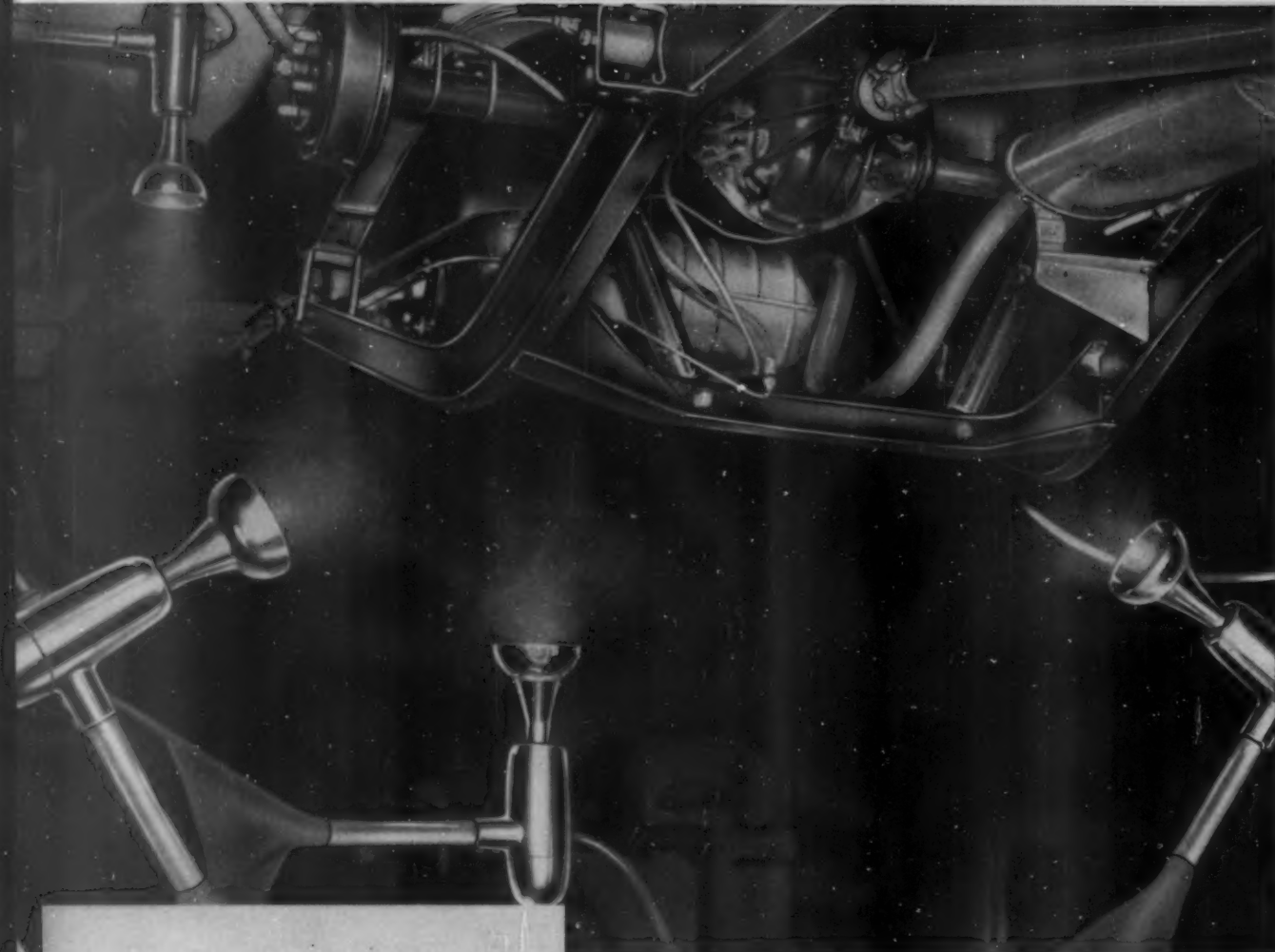
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◀ Rugged rotor and stator for a polyphase portable tool. The rotor consists of squirrel cage, embedded in laminated core with bars and end rings of copper, brazed or welded together. The stator has a high-grade silicon steel core with top-quality rag paper used to insulate the coil from the core. The finished winding is taped and thoroughly impregnated with high-grade synthetic resin base varnish to assure trouble-free operation with minimum danger of short circuits and grounds.



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The exact motor for your machine is worked out quickly and accurately, with systematic methods of designing motors. This might include, for example, the use of R & M's unique "Electrical Slide Rule." Electrical equivalents can be set up on the slide rule to simulate the conditions under

which the motor must operate in your product. By this method we are able to investigate hundreds of different design possibilities, assuring the best motor for the job.

In some cases the answers point to a standard motor. And here, R & M offers a wide variety of types and sizes of complete motors or matched motor parts.

In other cases special motors are indicated. R & M is equipped to do a fast, thorough, economical job of custom-designing a motor that's exactly right for your product.

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LAZARD FRÈRES & Co.

May 23, 1956.



A glove that management wanted

The workman's frequent objection to stiff protective gloves is one of management's chief problems in fighting the high cost of hand and finger injuries. These injuries account for 25% of all disabling accidents.

That's why Edmont developed the "Snorkel", a superflexible coated glove, that even chronic glove-haters will wear. It is extra soft, extra comfortable and easy to work in. Gives excellent protection and long wear, too, because of its vinyl coating.

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Edmont
JOB-FITTED GLOVES



institutions own Ford stock. More than 87% of all shares were represented at the meeting, in person or by proxy.

Many of those present were obviously attracted by hero-worship of the Ford name or by curiosity. "My husband insisted I come out here," said one woman. "I've never been to anything like this before in my life."

About 60% of the audience, as might be expected, came from the Detroit area. Many were Ford workers who dropped in during their lunch hour or before reporting for the afternoon or night shifts. One family was represented by a teen-age son who bought six shares with his own money. One man was a retired Chrysler worker who owns a few shares of Ford stock and who drives a Pontiac.

The company had hoped broader stock ownership would help sales of Ford products, but the parking lots had the same preponderance of General Motors cars as parking lots anywhere else. Said a man who owns stock of both Ford and GM: "I drive a Cadillac and wouldn't change." But another stockholder in both companies countered that he now drives a Chevrolet after years of Ford-owning and he's sorry he switched.

• **Loyal and Proud**—By and large, it was an intensely loyal group of shareholders. There was the man from Louisville who took the floor at the meeting to proclaim that he had held Ford stock for 25 years—Ford of Canada, Ford of Great Britain, Ford of France—and had waited eagerly for the chance to invest in Ford of the U. S. "I'll never sell a Ford stock," he wound up, "and I'm buying more all the time."

There was also the Ford worker who said, "All I've ever wanted is Ford stock."

And there was the retired railroad contractor from Columbus, Ohio, who said he had admired Henry Ford I when he was supplying materials to the Detroit, Toledo & Ironton RR during Ford ownership. He claimed he got delivery of the first Continental to reach Columbus last October, and also owns one of the last Lincoln Continentals that was manufactured in 1948.

• **Everybody Happy**—It was a cool, sunny day, just fine for an outing, and everyone seemed happy with Ford. Even Isadore Blau, the professional dissenter, conceded that "Mr. Breech was very courteous and fair."

Still, more than one stockholder brooded as he gnawed on his fried chicken: Why did Ford's stock go down? One Detroit mused that he had put in an advance order for 100 shares "just for kicks," not thinking he would ever get them. Now, he said, "I'm certainly glad I didn't get any more than that." **END**

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Houghto-Safe has proved its reliability by doing a superior job where million-dollar airplanes and the lives of pilots depend on its hydraulic properties. And the

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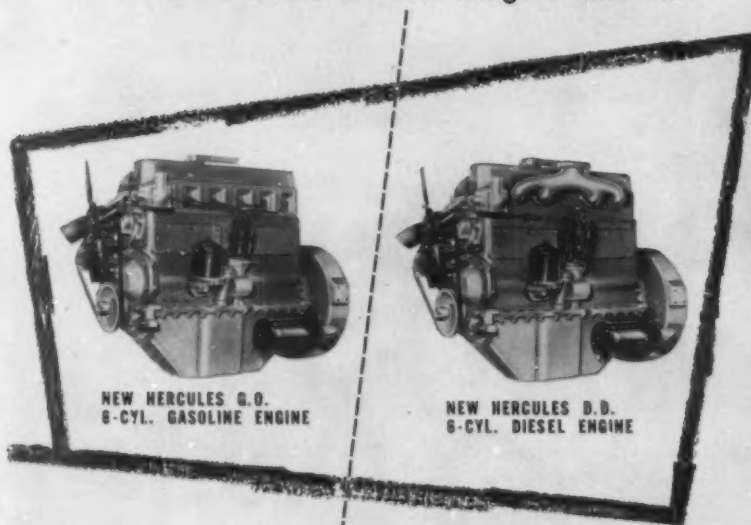
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Hercules' reputation isn't merely a way of doing business or just the top quality of our product. We feel that our reputation means more than good business ethics and a quality product. Our reputation also means supplying new and better engines to meet the various needs of our customers.

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For help in solving your power problems, contact our factory. Our sales-engineers will be glad to assist you. No obligation, of course.

HERCULES MOTORS CORPORATION

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FINANCE BRIEFS

Wall Street will get another new building by late 1959, if construction plans go ahead on schedule. The Atlantic Mutual Insurance Co. and U.S. Trust Co. will sell their properties at 49 and 45 Wall St. to the Metropolitan Life Insurance Co., which will then clear the site and put up a new 27-story building with Atlantic and U.S. Trust as principal tenants.

In Chicago, dividend rates were hiked by First Federal Savings & Loan Assn. and Chicago Federal Savings & Loan to meet the local savings banks' boost in interest rates. Instead of 2½%, the S&Ls will pay 3%. Savings bank rates were raised recently from 1½% to 2%.

Floyd Odum, Atlas Corp. president, told stockholders that this will be a "low profit year, since there are no special situations to dispose of. Uranium will not come into its full earning power until 1957 and 1958."

Revlon, Inc., big cosmetics manufacturer, announced a 100% stock dividend and a dividend hike from 37½¢ a share to the equivalent of 50¢ a share on the new stock.

American Telephone & Telegraph's huge \$250-million debenture issue will hit the bond market on July 10, with two strong Wall Street underwriting groups prepared to bid for the bonds.

Fire losses went up again last year after a slight dip in 1954, according to the National Board of Fire Underwriters. Losses in 1955 totaled \$870-million, up \$15-million from the previous year. Top total for any postwar year was \$903-million in 1953, when fire wiped out General Motors' Livonia (Mich.) plant. Total fire losses for last ten years: \$7.5-billion.

What's h'in a nyme? A British subsidiary of Ekco Products Co.—Platers & Stammers, Ltd.—has announced it will change its name to The Prestige Group, Ltd. The company makes egg beaters, can openers, cutlery, and other kitchenware.

U.S. demand for petroleum products will rise 5% over last year, and foreign demand will go up 10%, says M. J. Rathbone, president of Standard Oil Co. (N. J.). Last year, the figures were 8% and 14% respectively, but the postwar average is around 4% and 9%. Rathbone also noted: "The supply and demand situation does not at this time indicate that an immediate general increase in the price of crude oil could be sustained."



Blaw-Knox Towers on ultra-modern microwave-telephone system

now they phone by microwave

Chances are that you've already placed calls over a hook-up that includes an ultra-modern microwave carrier telephone system. If not, you soon will be, as telephone companies continue to install this type of system which uses a network of steel towers. Service to customers is better; upkeep problems fewer.

Blaw-Knox is providing these pioneering companies with a complete tower package service.

Working from carefully coordinated engineering information, individual towers are designed, fabricated and erected as integral links in the system.

This complete microwave tower service is but one of many Blaw-Knox achievements that help American industry improve services, lower costs and increase production. Other Blaw-Knox activities of possible interest to you are listed below. Information on any of these will be sent on request.



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How to speak a universal language...with RCA 16mm Film Projectors

In this Esterbrook Pen Company plant in Mexico, non-English speaking employees are taught to make pens by means of an RCA 16mm Film Projector; first by demonstrating each operation in slow motion and then at standard speed. Film training of this type has actually inspired employees to equal their American teachers in output! Over 100 films have been produced by Esterbrook and are used in Denmark, France and Venezuela; also in England and Canada where language is no barrier . . . all with outstanding production results.

In industry there are hundreds of situations where RCA's 16mm Film Projectors find profitable use . . . in

job instruction where one expert operator can teach dozens of classes in dozens of countries simultaneously, in employee indoctrination, work simplification, field selling, sales meetings, presentations. They are widely used by schools, churches, civic groups—wherever a message has to be visualized and impressed.

• • • • •

For free booklet on the profitable uses of RCA 16mm Film Projectors, or for information on other RCA electronic products, write Radio Corporation of America, Dept. F-26, Bldg. 15-1, Camden, N. J.



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RCA TV Cameras, used today in many television stations, are part of a complete line of high quality equipment RCA supplies for radio and television broadcasting stations.



RCA Mobile 2-Way Radio provides instant 2-way communication between office and vehicles in the field. It speeds service, cuts cost, mileage and telephone expense.



RADIO CORPORATION OF AMERICA

In Production

. . .

Elgin Starts a Pilot Plant To Make Jewel Bearings

The U.S. Bureau of Ordnance has awarded a pilot production contract to Elgin National Watch Co. for production of instrument bearings—the tiny ruby and sapphire parts that are essential in the production of timepieces and instruments.

The contract was awarded to encourage development of automatic machinery to cut and shape the small parts. Over the past few years, Elgin has developed a line of semi-automatic production machinery, but without further mechanization, the cost of U.S. bearings is likely to stay considerably higher than those imported from Switzerland. Swiss sources have supplied the world's jeweled bearing needs for the past 150 years. Now, about 85% of jewel bearings used in the U.S. come from Swiss manufacturers. About a dozen U.S. firms supply the balance.

The Ordnance Department is underwriting the Elgin bearing production to encourage the development of a domestic source of special bearings to supplement stockpiling of standard sizes.

Stockpiling bearings can't be guaranteed to cover all the needs of the instrument industry because new instrument and timepiece designs often require bearings of unpredictable size and shape. So Elgin hopes it will be able to develop equipment that will be able to supplement the output of other domestic manufacturers to meet emergency requirements if Swiss sources are cut off.

. . .

Government's Last Rubber Plant Is Sold to Union Carbide

The government is all sold out of rubber plants. The Rubber Producing Facilities Disposal Commission has signed the last sale contract with Union Carbide & Carbon Corp.

Union Carbide will pay \$3,125,000 for an alcohol-butadiene plant at Louisville, Ky.—the 28th rubber plant the commission put on the auction block.

The Louisville rubber plant is now leased by Publicker Industries, Inc., which will continue to operate the plant until its lease expires in 1958. Union Carbide will move in after that.

. . .

Plants Open Up to Make More Transistors and Their Kin

Hot demand for components for semiconductors—transistors and their kin—is spurring construction of new production facilities.

MORE NEWS ABOUT PRODUCTION ON:

p. 82 . . Mica Sheet From Scraps.

p. 84 . . Building Low-Cost Shelter.

Sylvania Electronics, Inc., has bought a plant in Hillsboro, N. H., is setting out on a multimillion-dollar expansion of facilities for making crystal diodes and transistors.

Texas Instruments, Inc., is enlarging a new plant that it's building near Richardson, Tex., for semiconductor production.

Fenwall, Inc., makers of precision temperature control devices, has set up new affiliate, Fenwall Electronics, Inc., in Framingham, Mass. Fenwall Electronics will make all types of thermistors—semiconductor devices for voltage regulation, temperature regulation, and other uses.

. . .

Mural TV May be Moving Another Step Nearer

Mural television may have got a new nudge forward from British technicians.

Dr. D. Gabor, of the Imperial College of Science & Technology at London University, has developed a flat TV picture tube, without the usual funnel-shaped stalk protruding at the rear end. He claims his flat TV picture tube system differs radically from systems demonstrated recently in the U.S. (BW-Mar.10'56,p104). Chiefly, Gabor says, his type of television tube doesn't require as much auxiliary circuitry as the versions being developed by several U.S. manufacturers.

Some see these flat TV picture tube systems as fore-runners of mural TV when screens only a couple of inches thick and with dimensions that might run to 5-ft. by 7-ft. will hang from walls.

The British National Research & Development Corp. has granted funds for continuing development of Dr. Gabor's new TV system.

. . .

Reynolds Metals Squeezes Out Its First Titanium Extrusions

The first commercial scale order of titanium extrusions for jet engine parts has come out of Reynolds Metals Co.'s Richmond (Va.) plant. The parts were "typical sections," produced on a small scale, according to Executive Vice-Pres. Louis J. Reynolds.

Extrusion—squeezing hot billets of metal through a die under tremendous pressures—is expected to be one of the more effective ways of fabricating titanium parts and shapes.

The light strong metal is easily contaminated when it is heated, and scrap recovery is difficult. The extrusion process produces little scrap and during the fabricating steps there's a minimum of contact between the hot metal and contaminants.

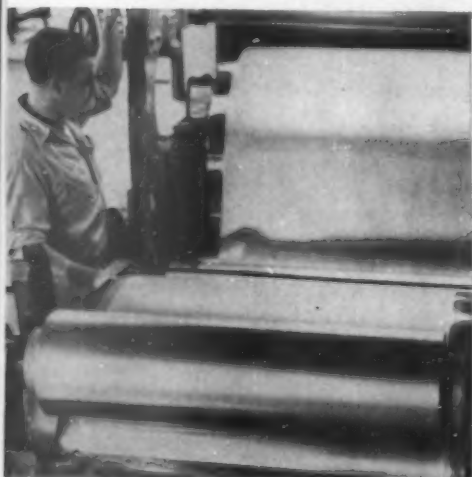
Man Makes Mica Better Than Nature



1 Furnace removes most of water content of the mica splittings.



2 Mica goes into alkali bath that puffs it up, separates layers.



3 Conventional papermaking machine converts mica pulp into a sheet.

MAKERS of electrical condensers can never get enough high-grade mica. As a result, they import most of it, at prices that go over \$40 a lb. for choice pieces. They're willing to pay such prices because of mica's unequalled insulating properties at high temperatures.

Now, Samica Corp. of Rutland, Vt., a subsidiary of Mica Insulator Co., recently acquired by Minnesota Mining & Mfg. Co., thinks it has licked the supply problem with an improved process that makes satisfactory mica sheets from scrap mica. Starting with a low-grade base material, the mica is made into a continuous sheet by a process similar to manufacturing paper from pulp.

The product may fill more electrical jobs that call for the higher grades of mica, such as ignition capacitors for jet aircraft, at a substantial saving in cost.

• **Hand Work**—Mica is a mineral that is dug out in blocks made up of thousands of thin films laminated together. Workers spend tedious hours in splitting the mica blocks by hand and sorting the pieces for quality (BW—May 17 '52, p118).

The highest-grade sheets of mica, free from discoloration and other defects, are scarce everywhere in the world. The mineral is mined in the U.S., chiefly in the South, but the world's largest suppliers are India, Brazil, and Madagascar. Of the 10-million lb. of mica imported last year, less than 300,000 lb. met the standards for capacitor grade.

This grade of mica sells from about \$12 a lb. for small pieces to more than \$40 a lb. for the largest sheets. The large pieces are so scarce—and so vitally needed—that many of them are tucked away in the government's strategic stockpile. This leaves industry still shorter of the material.

• **Upgrading**—The new process is said to turn low-grade or scrap mica, worth about 20¢ a lb., into high-grade mica to sell for \$4 a lb. in sheets ranging up to 1 sq. yd. in area.

Mica scrap is put in a furnace and heated to a prescribed temperature, which dries out the mica and changes its crystal structure. Then it is dipped in a saturated alkaline solution, which cools the flakes and puffs them up, causing the thin layers to separate slightly.

Next, the mica is treated in an acid solution that softens the material. By this time, the layers barely stick to each

other. The mica is then washed and agitated to produce a pulp or slurry that is passed through a conventional Fourdrinier papermaking machine. The result is a mica sheet that looks like paper and consists of tiny mica flakes only a few hundred-thousandths of an inch thick.

Rolls of these sheets are sent to Mica Insulator Co.'s Schenectady (N.Y.) plant, where they are layered to desired thicknesses and impregnated with silicone resins. By filling up all the air spaces in the sheets, the silicone binder improves the electrical, thermal, and mechanical properties of the laminated sheet. The sheet's thickness is closely controlled to provide uniform resistance to electrical currents; capacitor-grade mica can resist high voltage even at high temperatures.

The silicone-impregnated sheets, coming in thicknesses of 0.0015 in. and 0.002 in., sell for \$9.65 a pound. It's ready to be cut to size for use in capacitors. Some capacitor manufacturers, however, prefer to buy the raw mica paper direct from the Rutland plant for \$4 a pound. They impregnate it themselves with silicone or even with polyester resins.

• **Pioneering**—Until now, designers of electrical and electronic equipment have been restricted in their use of mica by the high cost of capacitor grades in large sizes. Besides cutting this cost, the new material has the advantage of being flexible. In cylindrical rolled capacitors, mica sheet can be used instead of paper insulation, permitting units to be more compact and to operate at higher temperatures without loss of efficiency.

The Samica process grows out of a similar method used since 1953 to make electrical-grade mica (BW—Jun. 14 '52, p50). Mica Insulator Co. and General Electric Co. produce this form of mica in continuous sheets, which are impregnated with resins and laminated in rigid or flexible plates or in tape form. Electrical-grade mica is used in electric motors, transformer coil wrappers, and appliances such as toasters, irons, and ovens.

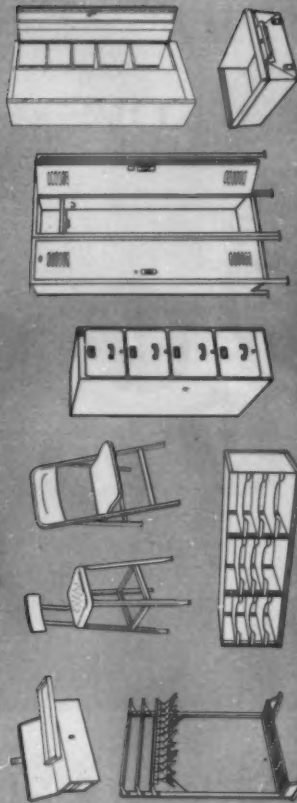
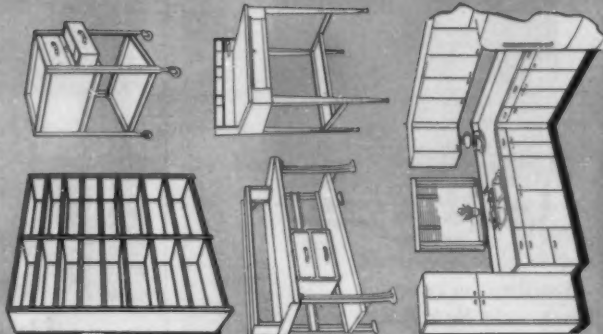
Capacitor-grade mica has about three times as much resistance to voltage breakthrough as the electrical grade, and it is more closely checked for uniformity. Electrical-grade mica costs about \$1.25 to \$2 a lb., depending on thickness of the sheet (0.002 in. to 0.004 in.). **END**

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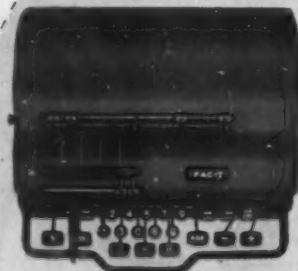


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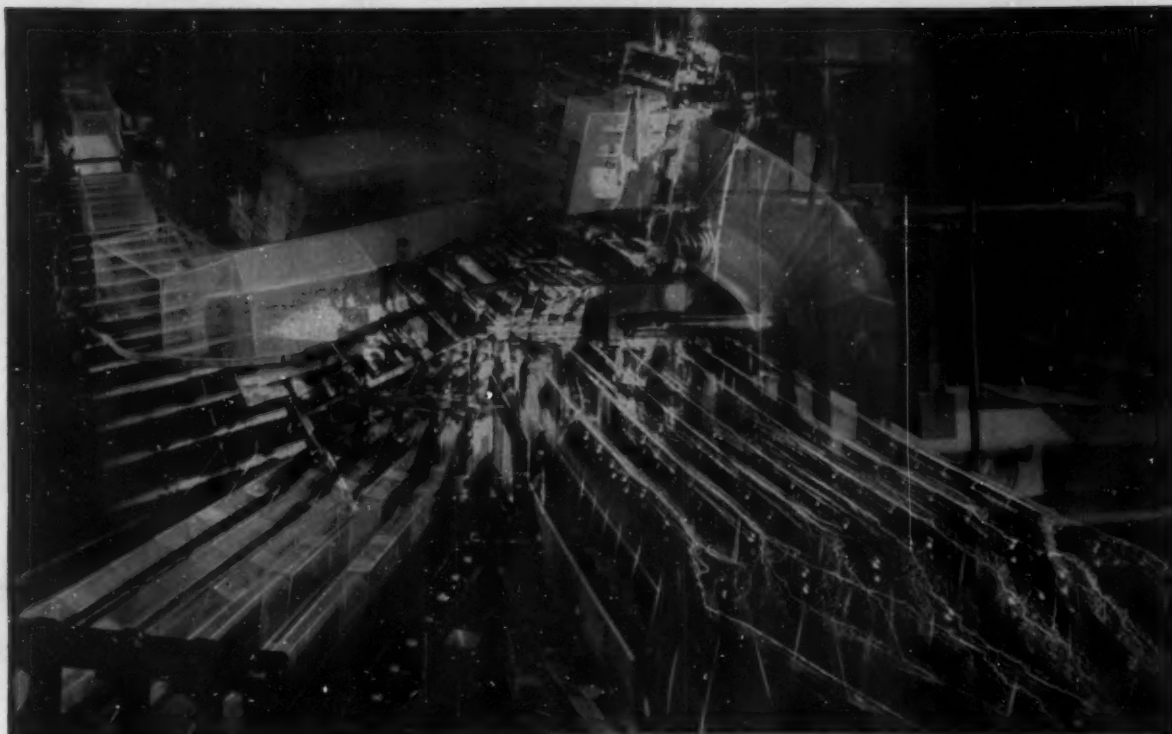


. . . and It's a Warehouse

Improved methods of chemically treating and preserving wooden poles promise to put pole-type structures, like the one pictured above, back in business permanently in competition with the more expensive kind that need foundations.

Now that pressure treatment makes the poles last longer in the ground, several large companies are considering a shift to this type of construction because of its economy. Among them are U. S. Gypsum Co., Dow Chemical Co., and Wilson & Co. This boost for poles is likely to set off a new trend in warehousing in areas where weather and other conditions permit.

• **Cheap and Simple**—Pole-type constructions are simple and easy to erect,

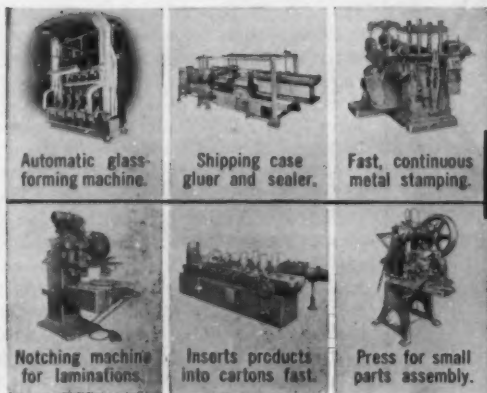


Automatic motions for automatic profits

ABOVE: Composite motion study features two different types of Standard-Knapp automatic case loading equipment moving bottles and cartons from filling lines into cases on shipping lines.

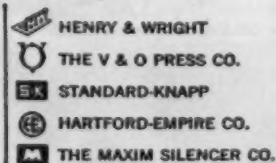
Standard-Knapp — The Emhart Division that manufactures automatic packaging equipment — can increase your profit margin *automatically* by eliminating costly waste motions in packaging operations. Whether your product goes into a can, bottle, jar or bag, Standard-Knapp can provide a single machine or a completely automatic packaging line which will give you *engineered economy* — *all the way* from packing the carton to gluing and sealing the case. Other Emhart Divisions can offer you similar cost-saving motions in metal forming, in small parts assembly and in the automatic manufacture of glass containers.

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as well as cheap. The chemically treated poles are sunk directly into postholes dug in the ground. They act as the only vertical support members—no foundation is required. Sheathing and horizontal structural timbers are nailed to the poles.

Cost of the pole-type buildings runs in the neighborhood of \$1 per sq. ft. For the more conventional constructions that need foundations and conventional walls, costs go to \$3 and up per sq. ft. The lower cost for pole construction is due to the smaller amount of material required, as well as to lower costs of labor.

• **Revival**—At one time, pole-type structures almost became extinct, as virgin timber became scarce and was replaced by second- and third-growth wood that rotted too fast, shortening the life of the buildings and making their use unprofitable.

Now, pressure-treating the poles with preservatives that protect them from rot and from the elements is removing the "temporary" tag attached to such buildings. Pole-type constructions are branching out from use for barns and farm buildings into a wider market as warehouses, office structures, and even houses in rural areas.

General purpose shelters built on poles, with closed or open sides, can be used in lumber yards, new and used car lots, boating and recreational areas, and as either open or closed warehouses where more expensive buildings would be impractical.

Storing farm implements, for instance, can be a problem to dealers as well as to farmers. One International Harvester dealer has put up a pole-type building for combined office, display, and storage use to get his high-priced implements under cover.

• **Treatment**—The more common wood preservatives used in treating the poles are creosote—in use for half a century—and the newer pentachlorophenol. The latter—called penta for short—is rapidly gaining in popularity, as it is cleaner, easier to handle, and very effective in keeping the wood from deteriorating. It's a light brown crystalline organic substance that does not raise or warp the wood grain, resists metal corrosion, and is quite toxic for termites. Also, it does not readily dissolve in water—it takes 7,000 gal. of water to dissolve one pound of penta.

In pressure treatment, the wood is impregnated with the preservative. The poles are subjected to air pressure in a steel cylinder; and the preservative, also under pressure, is then added and heated. The compressed air forms a cushioning in the wood and serves to regulate the penetration of wood cells. After treatment, the poles pass through a vacuum and lose whatever free preservative remains on their surface. **END**

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Increased production demanded additional steam in American Cyanamid's plant at Bridgeville, Pa. Management decided to analyze its power system with an eye to improving operating economy and efficiency.

The decision was *modernization*, with emphasis on more efficient distribution of steam, generated by burning pulverized coal. New steam traps were installed, waste steam was utilized, condensate was recovered, piping was simplified, a thorough system of maintenance and repair was instituted. The sound thinking behind this unusual program—unusual in that power system economies took place *after* steam generation—today rewards American Cyanamid with a savings of \$100,000 a year!

For further information or additional case histories showing how other plants have saved money burning coal, write to the address below.

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NEW PRODUCTS

Bolts Get Stronger For Aircraft Jobs

Structural steel bolts for jet aircraft and other critical jobs are being made stronger than ever. The Standard Pressed Steel Co., Jenkintown, Pa., claims that their new Hi-Psi bolts are 40% stronger than the best standard aircraft fasteners used today.

The bolts will be used for first time in a wings-to-fuselage joining job on new Convair F-102A delta-wing interceptors. They are rated at a minimum tensile strength of 230,000 psi. and a minimum shear strength of 130,000 psi. The company says that today's standard aircraft bolts have tensile and shear ratings of 160,000 psi. and 95,000 psi., respectively.

The new bolts also are designed to have up to 78% greater fatigue strength than standard steel fasteners. Usually, metal fatigue weakness and brittleness become greater as the tensile strength is increased. The manufacturer attributes the greater fatigue strength of its bolts to these factors:

- Special finishing to eliminate surface flaws.
- Improved design of bolt head and nut shapes.
- A new thread design that puts extra metal at the bottom of the thread—most common point of fatigue failure.

NEW PRODUCTS BRIEFS

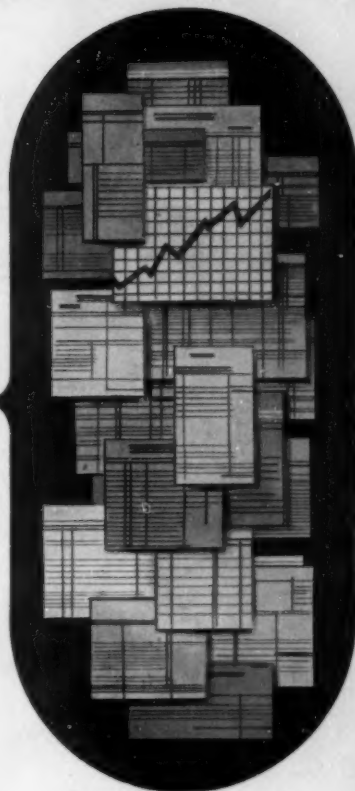
Home-grown atomic tracers: A new machine made by General Tire & Rubber Co. will enable hospitals to make their own radioactive isotopes for tracking down heart defects and other diseases. Though similar to huge reactors in operating principles, the new unit is only 8½-ft. high and 6½-ft. in dia.

A new typewriter made by Adlerwerke, Frankfurt, Germany, enables typists to straighten out right-hand margins. The machine, which is especially useful in mimeographing and photo offset work, achieves even margins by spacing out all the letters on the line. U.S. representative is Addo Machine Co., Inc., New York. Machine costs about \$300.

Testing condensers without removing them from radio or television sets is the job of a new "Capacohmeter" made by Simpson Electric Co., of Chicago. The company calls capacitor testing time the serviceman's number one problem and estimates the new instrument will cut this time up to 75%.

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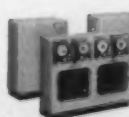
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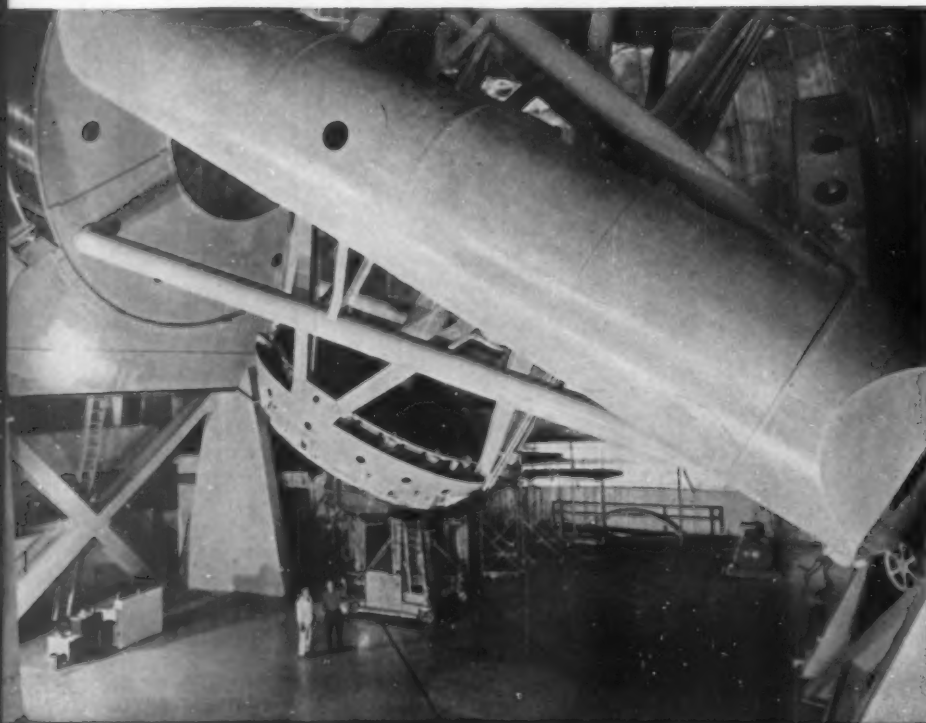
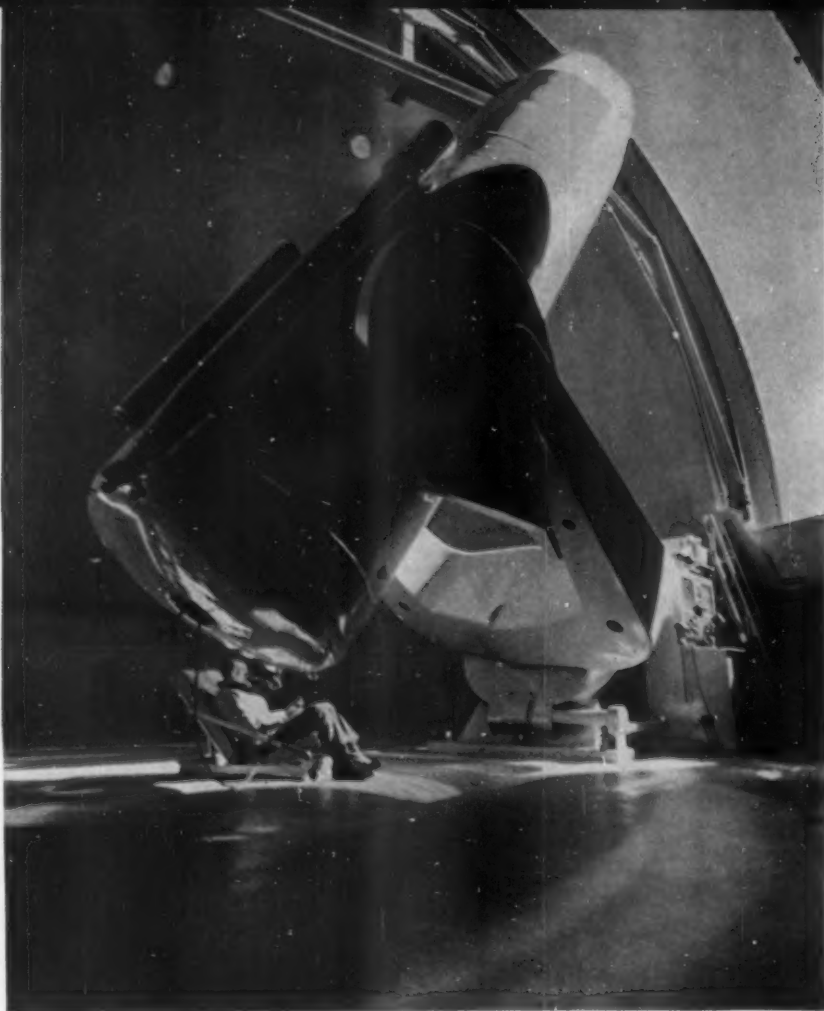
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RESEARCH

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. . . then close in on the most promising photographic target area with the big 200-in. Hale telescope that reaches farther out into space than any telescope yet devised by man.

Astronomers are solving many of the scientific riddles involved in the development of such practiced matters as guided missiles and atomic energy. That explains . . .

Why Industry Woos Cloistered Scientists

THE FACT that astronomers—and astronomers alone—hold the key to many of the problems of modern scientific research has become a basic factor in giving them an unexpected new appeal to industry.

All ballistic research, guided missile and space satellite development work, for example, involves astronomy. In question are not only the astronomers' meteor studies, but also their work concerning the flow of planetary and stellar gases. Another example: Astronomers have made studies of the energy output of the sun that have been vital in atomic energy developments.

The emphasis on work of this kind in the last few years has suddenly made industry anxious to lure astronomers down from their mountaintop observatories and into industrial laboratories.

• **Shortage**—There are only 300-odd astronomers in the U.S. A number of them have succumbed to industry's

appeal—acting as consultants to some of the nation's best-known corporations on a two-to-three-day a month basis. A few—chiefly located in the Eastern states—have left the observatory completely to take on jobs in industry for which they, and they alone, are peculiarly suited.

However, the hard core of astronomers in the U.S. today seems to be resisting all attempts to make their knowledge practicable.

• **Ivory Tower Science**—This aloofness—in the face of all the excitement about space travel and space satellite stations—is a revealing commentary on the basic purpose of astronomy itself.

Oldest of the sciences, astronomy remains pretty much the same today as it was in the days of the ancients, even though new tools—such as the 200-in. Hale telescope on Mt. Palomar in California (picture)—have extended the astronomer's eye far out into the



PHOTOMETER shows tiniest differences of light between two photographs taken of the same field.

TELESCOPE, which is actually a camera, produces a photograph of the nebulae surrounding the constellation Virgo.



Story starts on page 93

universe. But astronomical research has never been directed toward individual objects; rather it has been toward the discovery of physical laws and truths of universal applications.

Astronomy provided Galileo with proof that the earth was not the center of the universe. It provided the critical tests of Newton's laws of motion. It was astronomy that offered the most decisive proof of Einstein's theories of relativity.

• **Stock in Trade**—The chief reason that the astronomers' research is so valuable to other scientists is the fact that astronomers can jump over the traditional boundaries of scientific specialties. There is no other science that requires

Vault contains more than 35,000 plates exposed on Mt. Wilson and Mt. Palomar.



such a broad degree of competence in physics and mathematics plus a kind of instrumental genius as astronomy does.

It's this broad knowledge that is sending industrial scouting parties to the astronomers' aeries. One of the quests is for more theories on atomic fusion. Astronomers had been arguing over the essentials of the hydrogen bomb process for years prior to the original Atomic Energy Commission work. Fusion is one of the processes involved in the action of sun and stars—and astronomers naturally were curious about it. Their theory that fusion of deuterium (heavy hydrogen) was one of the processes that powers the sun and stars was the first official record of this potential source of energy.

• **Detached**—Astronomers themselves take no responsibility for applying their knowledge. What they learn is free—to anyone. The manmade satellite that the U.S. hopes to put up in an earth-circling orbit sometime next year appeals to them more as a means to stretch their research out into the universe than it does as a technical feat. New vistas of scientific information will be opened up to them through the use of space satellites.

Given special instruments aboard space satellites traveling above the earth's protective band of atmosphere, the astronomer could extend enormously his knowledge of the incredibly distant stars and galaxies.

• **Who Are They?**—Who are the men thus bound to the pursuit of the last of the truly pure sciences?

One of the biggest concentrations of typical classical astronomers engaged in active research in the U.S. today is clustered in California, where there are ideal viewing conditions (300 cloudless nights a year).

Working at the Lick Observatory on Mt. Hamilton, near San Francisco, and at the Mt. Wilson and Mt. Palomar observatories in Southern California, they pursue a broad program of exploration into space.

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• **Telescope's Role**—The job of all such reflecting telescopes is to collect light from a distant object in space and concentrate it to such an extent that it can be registered on a photographic emulsion. The bigger the mirror, the greater amount of light it can collect—and hence the dimmer light it can record. But for reasons that lie deep in the fundamental laws that govern the behavior of light, large reflecting telescopes have a very limited angle of view. So the further a reflecting telescope can see, the smaller the piece of celestial sphere it can photograph.

That means that in large observatories the big scopes are supplemented by other telescopes that can see wide without sacrificing all ability to see far. At Palomar, these supplementary telescopes are Schmidt telescopes. The Schmidt telescopes can photograph an area equal to 200 moons at one time, while the Hale telescope can see only a part of one moon at a single time. Thus astronomers use the Schmidt telescopes for scouting photographs, then close in on the most promising areas with the big telescope.

• **How They Work**—Every telescope is really a camera. That's because a photographic plate is more effective than the human eye. A photographic plate can accumulate the hour-long effect of light utterly invisible to the human eye and build up an image of the light source. And photographic plate records the picture permanently.

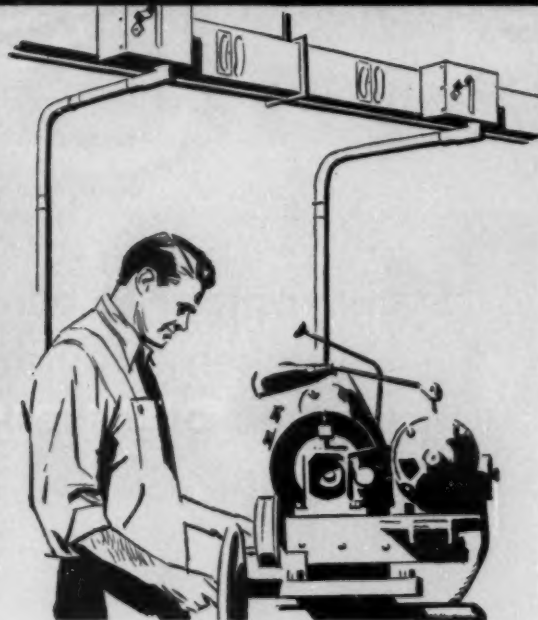
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These are designed for the study of the sun. The sun offers plenty of light; the problem is to get a big enough image of the sun. Here the answer lies in lenses with long focal length. That is why the three solar telescopes on Mt. Wilson are long, one of them requiring a 170-ft. tower with a 75-ft.

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Story starts on page 93

universe. But astronomical research has never been directed toward individual objects; rather it has been toward the discovery of physical laws and truths of universal applications.

Astronomy provided Galileo with proof that the earth was not the center of the universe. It provided the critical tests of Newton's laws of motion. It was astronomy that offered the most decisive proof of Einstein's theories of relativity.

• **Stock in Trade**—The chief reason that the astronomers' research is so valuable to other scientists is the fact that astronomers can jump over the traditional boundaries of scientific specialties. There is no other science that requires

VAULT contains more than 35,000 plates exposed on Mt. Wilson and Mt. Palomar.

such a broad degree of competence in physics and mathematics plus a kind of instrumental genius as astronomy does.

It's this broad knowledge that is sending industrial scouting parties to the astronomers' aeries. One of the quests is for more theories on atomic fusion. Astronomers had been arguing over the essentials of the hydrogen bomb process for years prior to the original Atomic Energy Commission work. Fusion is one of the processes involved in the action of sun and stars—and astronomers naturally were curious about it. Their theory that fusion of deuterium (heavy hydrogen) was one of the processes that powers the sun and stars was the first official record of this potential source of energy.

• **Detached**—Astronomers themselves take no responsibility for applying their knowledge. What they learn is free—to anyone. The manmade satellite that the U.S. hopes to put up in an earth-circling orbit sometime next year appeals to them more as a means to stretch their research out into the universe than it does as a technical feat. New vistas of scientific information will be opened up to them through the use of space satellites.

Given special instruments aboard space satellites traveling above the earth's protective band of atmosphere, the astronomer could extend enormously his knowledge of the incredibly distant stars and galaxies.

• **Who Are They?**—Who are the men thus bound to the pursuit of the last of the truly pure sciences?

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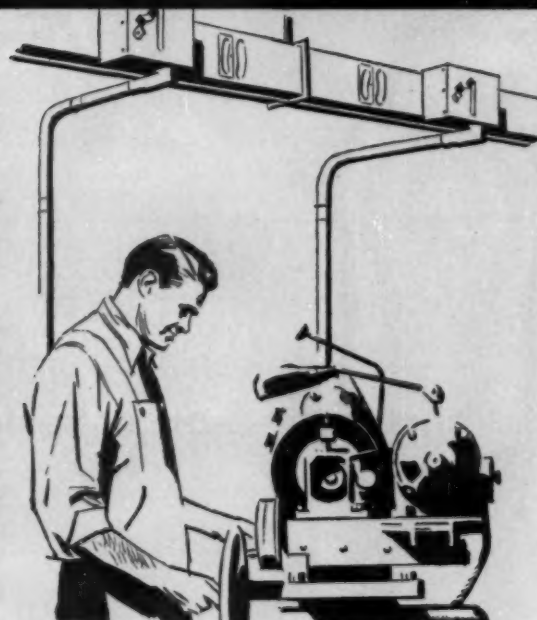
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Sound-conditioning and insulation for every type of business. Here, Sprayed "Limpet" Asbestos on the ceiling of the Hillcrest Country Club of Oklahoma City, Oklahoma, helps maintain an even temperature while subduing noise to produce a quiet, comfortable atmosphere.

Sound-barrier to efficiency broken through with sprayed-on asbestos fibers

• Sprayed "Limpet" Asbestos controls sound, insulates, protects from fire

A definite barrier to efficiency and comfort in modern business is caused by the uncontrolled sounds of clattering typewriters and business machines, the rumbling of factory equipment and the rise and fall of many individual conversations. These disturbing noises cause errors, lost time and wasted motion. Now these money-wasting sounds can be easily controlled with Sprayed "Limpet"® Asbestos, a unique acoustical material which doubles as a thermal insulator.

• **Sprayed on,** "Limpet" Asbestos forms an evenly textured, seamless blanket which traps and deadens sound waves, and prevents passage of heat. Applied on the under side of thin, single-layer roofs, this remarkable insulation has effected savings in heating costs as high as 50%.

• **Highly fire-resistant,** Sprayed "Limpet" Asbestos is a dual-purpose insulation that provides excellent fire protection. In tests by recognized laboratories, its fire resistance was rated up to four hours,

• **Controls condensation.** The surface of Sprayed "Limpet" Asbestos remains dry. There's no "sweating" effect.

Applied to any surface, Sprayed "Limpet" Asbestos adheres tightly without the use of other mechanical fastening devices. Because it's sprayed on, it follows the contours of any surface, however uneven or curved. Though its natural color blends with most color schemes, "Limpet" Asbestos can be easily spray-painted.

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pit beneath it. The upper end of a solar telescope includes two mirrors that reflect the sun's light to the telescope's lens. The lens then focuses the light in a room at ground level where the image is studied.

• **Two Jobs**—The two principal activities of astronomers are the study of the sun and the study of the stars. Studies of the sun are made during the day at Mt. Wilson. Studies of the stars are made at night both at Mt. Wilson and Mt. Palomar.

The study of the stars is generally divided into two main classes of work—direct photography and spectroscopy. Both may be used on a single problem.

Spectroscopy tells what chemical elements are present in the stars, indicates how hot they are, and tells something about their motion. In spectroscopy an astronomer takes the light focused by a telescope's lenses or mirrors and either passes it through a prism or reflects it from a ruled plate. Either way, he separates the light into its spectrum—the various wave lengths, or colors that comprise it. He makes a record of this spectrum on a photographic plate. Since each chemical element produces a characteristic set of color lines, the resulting spectrogram identifies the elements present in the source of light. Because temperature affects the lines that an element produces, the spectrograph also shows how hot stars are. And because motion toward or away from the earth also affects the lines, the spectrogram shows the speeds at which the stars are moving relative to the observer.

Spectroscopic work is done on moonlight nights. On darker nights—the nights the astronomers like best—direct photographs are made.

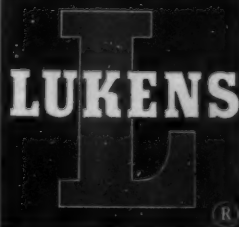
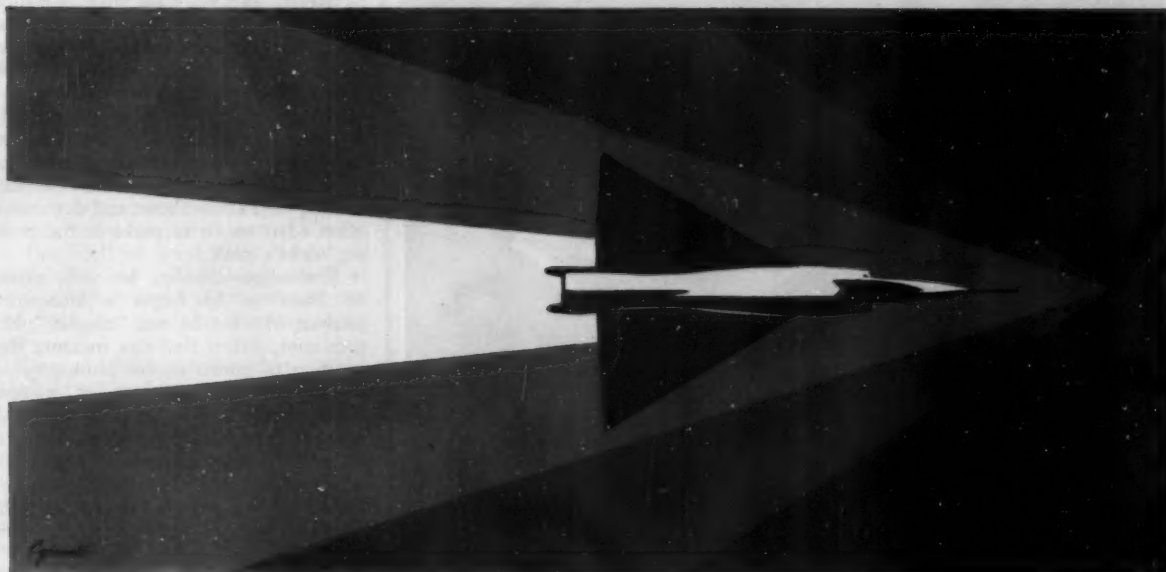
• **On the Job**—Astronomers working at Palomar live in or near Pasadena, where the laboratories and libraries of the observatories are, and where all of the "discoveries" are made. Astronomical photographs reveal little without long laboratory study.

One astronomer works at the observatory at a time. Usually he works three days at a time and often six to seven nights at a stretch. Some spectroscopic work, for example, requires a single exposure lasting three nights.

Telescope time is assigned according to the field in which an astronomer is working. For example, if it is a dark of the moon period, the astronomer using the big scope will be making studies of the distant stars. His tour of duty will begin about noon. His night assistant begins the night's work by opening the huge dome of the observatory as early in the evening as possible so that the mirror and the tube that holds it have time to adjust to outside temperature.

When darkness falls, the astronomer

FROM A STEEL TEST TUBE —TOMORROW'S AIRCRAFT!



■ Supersonic air streams howl through the huge new wind tunnel at the NACA's Langley Aeronautical Laboratory, Langley Field, Virginia. Air pressure chambers and tunnel walls are built of Lukens "T-1" and stainless-clad "T-1" steel plates. In this enormous project, as in so many others, the equipment builder's background of accomplishment and experience is an essential element. And Lukens has a long history of teamwork with such builders, supplying specialty steel plate for unusual applications. Remember—when the Wright Brothers built one of the world's first wind tunnels in their Dayton workshop in 1901, Lukens had been rolling steel plate for 76 years.

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rides the elevator up to the observer's cage at the top of the tube, high above the 200-in. mirror. The astronomer sits with his back to the stars. The light from the skies at his back passes down around his cage to the mirror, which reflects it back to the photographic plate.

Lights go out, and the astronomer sets the cross-hairs of the eyepiece on a guiding star just outside the fields he intends to photograph. He slides his photographic plate into place—and the exposure begins. Exposures on the 200-in. lens can last as long as 30 min.

The work in hand, visibility and other factors decide how long the astronomer remains in the cage. If he is making fairly short exposures, the chances are that about midnight he will turn the lights on and come down to get warm. In winter the temperature in the Palomar dome often drops below freezing.

Much depends on the weather. Sometimes visibility may not be good enough to make good photographs until 2 A.M. There may not be more than a dozen nights of very good visibility in a year—but it is on these nights that he does his most important work.

As day breaks, the astronomer descends with his plates. Later, he will develop and study them, and determine what adjustments to make in the coming night's work.

- **Evaluation**—Finally, he will return to Pasadena to begin a laboratory analysis of what he has "caught." He uses comparators that can measure the position of points on his photographic plates with an accuracy of a few hundred-thousandths of an inch and microphotometers that determine the intensity of the light that affected the emulsion on the plates. These measurements are then combined with similar measurements on plates taken in previous months.

- **Rewards**—In view of the dedicated nature of such work—and the relatively minor monetary rewards—what do astronomers hope to gain from their efforts?

Briefly, their aim is to advance the boundaries of science in three main fields—the solar system, our own galaxy (the Milky Way), and the universe itself.

- **Solar System**—The sun is not only responsible for holding the solar system together and for making life possible on earth, it is also the only star close enough to the earth to be visible as more than a point of light. The study of the sun has just begun. Some of the questions still to be answered are: What are sunspots? Why do they follow an 11-year cycle? In what ways does the sun control the many earthly phenomena that are unquestionably affected by it—the Northern Lights, the

violent magnetic storms, radio reception? What is the significance and the effect of the powerful magnetic fields that accompany sunspots?

• **Milky Way**—Studies of the Milky Way system generally are devoted to two problems—the distances of the stars from the earth, and their chemical composition and physical properties. Another thing astronomers want to learn is how the various types of stars derive their enormous energies. The feeling is that there is not one but a variety of complex processes, all of which liberate nuclear energy. Still another question is whether or not there is a uniform evolutionary cycle through which every star passes. If such a cycle were discovered and a time scale found to fit it, the age of every star could be determined, and the riddle of the origin and age of the universe would be closer to solution.

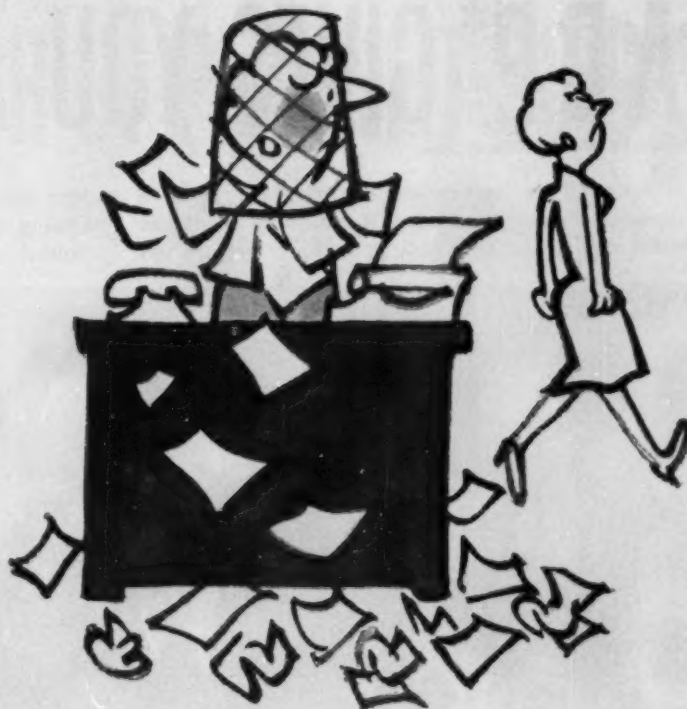
Another question concerns the novae and supernovae. Every year about 20 of the billions of stars in the Milky Way system "explode" into novae rising to a brilliance 50,000 times that of the sun. Once every few centuries one of the billions explodes into a supernova, several million times the brilliance of the sun. These flare-ups raise many questions: What causes them? What forms does matter assume in the heart of these great bursts? Is there any way of knowing ahead of time whether or when a particular star (our sun, for example) is going to let go?

One of the most interesting questions of all is: How was the solar system brought into being? Beyond the boundaries of the Milky Way are millions of other star systems, which have the same spiral structure and are comparable in size to it. Much of the research being done on these distant nebulae is the same as that being done on objects in the Milky Way. For example, the novae and the supernovae especially are so rare in the Milky Way that additional examples in outer space are welcome.

• **The Universe**—The study of the universe itself is necessary to determine how matter is distributed in space. The study of the sample of space that the earth's telescopes have explored so far indicates homogeneity.

While the study of the stars and other objects in the Milky Way system may produce clues as to the formation of the solar system, the investigation of the whole observable universe may answer the still more fundamental question: How was the universe born?

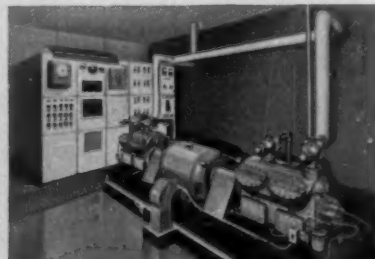
Besides helping to answer that question, the study of distant nebulae will provide vital information the basic laws that control all matter, whether that matter be found here on earth, or 12-sextillion miles away. **END**



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sure which way to turn, or which step to take first. Others who want it feel too much expense is involved, and consequently automation must wait.



The advantage of "composite experience" — The Moore representative has helped in many ADP systems. Behind him are the resources of the largest, most versatile manufacturer of business forms.

For any company, ADP can supply the right amount of automation. A Moore form-system is the heart of an ADP installation. In all Moore systems, sound principles of forms design and construction are applied, for efficiency and also economy of operation.

Moore does not make ADP machines, but forms only. In some cases an entire system is overhauled; in others ADP is introduced on a 'walk before you run' basis. This gives automation a larger role only after it fits itself in and proves its advantages.

How Speediflo made paperwork speed up

As the first step in planning for ADP throughout the company, automation has been applied to the Purchasing procedure.

See case history on facing page —→

ALL AT ONCE OR IN PLANNED STAGES



Traveling requisitions, a specially designed Moore product with a built-in envelope to hold the pre-punched item description tapes, are pulled from the file and forwarded to a central Purchasing location.



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As a by-product of the typing operation, an output tape captures vendor and item codes, quantities and prices. This tape automatically produces punched cards for running statistical and 'stock-on-order' reports.

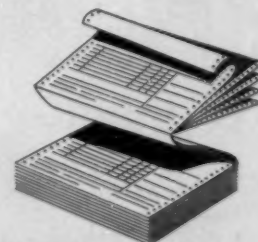


As experience is gained, this system will be expanded to automatically handle receiving records, accounts payable voucher checks, and all accounting within the purchasing system cycle.

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This smart parquet design is just one of many decorative ceiling patterns possible with new Armstrong Crestone. Here, in the Seville Hotel, Miami Beach, Crestone adds relaxing quiet to a busy arcade.



How does sound conditioning affect decorating plans?

Both modern and traditional tastes can be satisfied
by new patterns in acoustical materials



The over-all pattern of this Full Random Cushiontone acoustical ceiling blends well with the modern décor of Detroit's Northland Regional Shopping Center. Cushiontone provides comfort and efficiency, too, by soaking up as much as 75% of the sound that strikes its surface.

With an eye to public and employee relations, executives are putting increasing importance on the appearance of offices and other work areas. Even the acoustical ceiling, vital to comfort and efficiency, is being re-appraised for its decorative possibilities.

A wide variety of acoustical materials is now available to meet this demand. These materials come in textured and perforated styles to satisfy both traditional and modern tastes.

One of the newest and most distinctive of the textured tiles is Armstrong Crestone. Crestone's striated surface blends as well with conservative as it does with modern furnishings. The lines of light and shadow created by its ridged surface allow decorators to work Crestone into many interesting patterns.

For those who prefer a perforated material, Armstrong Full Random® Cushiontone, Minatone, and Arrestone are available in an attractive random design. The over-all pattern of Full Random's vari-sized holes eliminates the old-fashioned tiled ceiling effect.

Naturally textured materials like Travertone and Corkoustic and straight-row perforated Cushiontone, Arrestone and Perforated Asbestos Board complete the Armstrong line. All are finished with two coats of white paint.

For details on how Armstrong sound conditioning can help solve your noise and decorating problems, plus a free job estimate, see your Armstrong Acoustical Contractor.

For a free copy of "Quiet at Work," write Armstrong Cork Company, 4206 Indian Rd., Lancaster, Pennsylvania.

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Cushiontone® • Travertone® • Arrestone®
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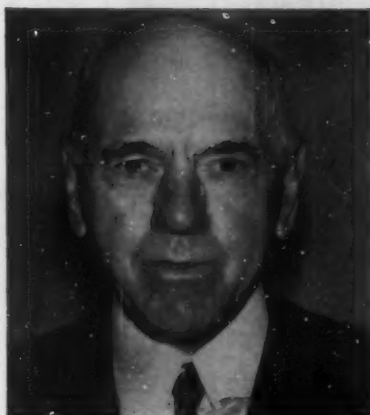
• Trade-Mark

Executive Pay: Up With the Boom



TOP PAY LEVEL PASSES \$700,000 MARK

Harlow H. Curtice, General Motors Corp. president, was one of three executives making over \$700,000 in 1955. His take, on heels of GM's record \$1-billion net: \$776,400.



Eugene G. Grace, Bethlehem Steel Corp. chairman, was second with \$705,923—a jump of over \$115,000. His company had record \$2.09-billion sales and \$180-million net.



Albert Bradley, chairman of GM's board, ranked third among high-paid executives. His compensation, amounting to a boost of \$90,025 over 1954, totaled \$701,525.

Right along with the rest of the economy, executive compensation also set a few records in 1955.

Here's the pacemaker: For the first time since 1950, when *BUSINESS WEEK* started keeping score on top officers of major corporations, the highest executive pay broke through the \$700,000-a-year mark.

Three men—Harlow H. Curtice and Albert Bradley of General Motors, and Eugene G. Grace of Bethlehem Steel Corp. (pictures)—crashed through the barrier last year.

Down the line, pay increases were plentiful—and many of them large. Out of the 132 reporting companies—covering 39 industrial categories—76 companies granted significant increases against 14 substantial declines.

- **Upgrading**—Last year also signaled new highs in the general level of executive pay (which, in the score-keeping, includes both salaries and bonuses). Procter & Gamble Co., for the first time, lifted its highest paid officer above the \$300,000 mark, bringing to 12 the number of companies having executives in that rarefied atmosphere.

The number was also boosted by the addition to the annual survey list of the now publicly held Ford Motor Co. Ernest R. Breech, chairman, and Henry Ford II, president, each received \$565,000 (though part of it is deferred through 1958 under a contingent pay plan).

To add to the general upgrading, seven more companies for the first time paid their top man more than \$200,000. These were International Harvester, Monsanto Chemical, General Foods, Standard Oil of California, F. W. Woolworth, Jones & Laughlin, and Youngstown Sheet & Tube. This \$200,000 figure is now becoming a sort of benchmark representing the level at which a man becomes a part of the really high-paid executive group.

As things stand, only 18 of the 132 companies pay their highest paid officer less than \$100,000.

- **Tax Bite**—Of course, all these figures are gross. When you deduct what Uncle Sam gets in taxes, the amount the executives take home is a small percentage of the total. For instance, out of the \$776,400 that Curtice received, he was able to keep \$121,328, according to a General Motors estimate.

- **Cuts, Too**—But despite the general upward trend in 1955—understandable

in view of the record profits last year—there were some sharp declines.

For instance, Westinghouse Electric Corp. slashed the pay of its top three officers some 30% as a direct result of the long strike. Management chopped its compensation right across the board. For Cwilym A. Price, president, this meant a reduction from \$186,050 to \$123,541. L. E. Osborne, vice-chairman, dropped from \$131,150 to \$88,750, and Mark W. Cresap Jr., executive vice-president, from \$115,093 to \$80,416.

The two top men of Philco Corp. also took home less money. William Balderston, chairman, and James H. Carmine, president until this year, said they were waiving participation in the usually hefty incentive bonus system to "increase the amount of distribution to other members of the organization." That meant a 50% pay slash for them.

Other companies making general cuts in executive compensation included Borden Co., Borg-Warner, and Thompson Products.

• **Big Jumps**—But, over-all, it's the increases that stand out in the rundown of 1955 salaries.

Individually, L. L. Colbert, president of Chrysler Corp., got the biggest increase—100%. In 1954, he got straight salary without bonus of \$250,900. Last year Chrysler paid him \$500,700—\$250,900 in salary and \$249,800 under a deferred bonus system. The latter is payable, if he abides by the rules of the plan, in five annual installments.

This big jump, of course, coincided with Chrysler's 1955 comeback, when sales of \$3.4-billion were at an all-time high and net income went from \$18-million in 1954 to more than \$100-million, third highest on record.

There were other big increases, too. John L. McCaffrey, now chairman of International Harvester Co., got a 40% boost; Barry T. Leithhead president of Cluett, Peabody & Co. almost 50%; and Charles A. Thomas, president of Monsanto, 37%.

Other increases in compensation were not so big in percentage figures, but in dollars and cents some of them make quite a splash:

- Eugene G. Grace, \$115,108.
- Harlow Curtice, \$90,000.
- Crawford H. Greenewalt, president of E. I. du Pont de Nemours & Co., \$73,563.

The changes in pay left the line-up of the highest paid executives in the list pretty much the same. Curtice, as usual in the past few years, topped them all. He was followed by Grace, Bradley, and Greenewalt.

• **Humming Factories**—Generally, the increases came just about where you would expect them. The auto industry was having its best year on record—with GM topping \$1-billion in profits—and

the performance shows up in the big bonuses paid.

Steel mills were humming, and every steel company surveyed rewarded its executives with additional compensation. Oil companies, except for Gulf and Union Oil, also paid their execu-

tives better, as did retail chains, tobacco companies, and the drug industry.

Results of the 1955 survey are tabulated below. The figures are compiled from company reports submitted to the Securities & Exchange Commission.

AGRICULTURAL MACHINERY

	Salary	Bonus	1953 Total	1954 Total
ALLIS-CHALMERS MFG. CO.				
R. S. Stevenson, pres.....	\$ 85,033	....	\$ 85,033	\$ 68,666
J. L. Singleton, v.p.....	54,350	....	54,350	52,683
W. G. Scholl, ex. v.p.....	54,200	....	54,200	....
DEERE & CO.				
Burton F. Peek, chm.....	\$ 94,039	....	\$ 94,039	\$ 73,052
*Charles D. Wiman, pres.....	60,032	....	60,032	67,200
Wm. A. Hewitt, pres.....	83,084	....	83,084	48,774
Bruce Laurie, v.p.....	80,084	....	80,084	....
*Died May 12, 1955; Hewitt elected president, May 24.				
INTERNATIONAL HARVESTER CO.				
John L. McCaffrey, pres.....	\$211,858	....	\$211,858	\$145,400
Peter V. Moulder, ex. v.p.....	136,520	....	136,520	94,860
Christian E. Jarchow, ex. v.p.....	128,434	....	128,434	88,210

AIRCRAFT MANUFACTURING & COMPONENTS

DOUGLAS AIRCRAFT CO.				
Donald W. Douglas, pres.....	\$162,528	....	\$162,528	\$158,625
F. W. Conant, senior v.p.....	108,518	....	108,518	105,816
Arthur E. Raymond, v.p.....	76,113	....	76,113	74,091
LOCKHEED AIRCRAFT CORP.				
Robert E. Gross, pres.....	\$143,408*	....	\$143,408	\$143,221
Courtland S. Gross, ex. v.p.....	112,487*	\$8,000	120,487	104,754
C. A. Barker Jr., v.p.....	113,421*	....	113,421	113,226
*Includes pension payments of \$17,480, \$10,041, and \$24,699 respectively.				
UNITED AIRCRAFT CORP.				
H. M. Horner, pres.....	\$185,700	....	\$185,700	\$185,750
*Frederick B. Rentschler, chm.....	125,450	....	125,450	126,350
Wm. R. Robbins, v.p.....	120,800	....	120,800	111,409
Leonard S. Hobbs, v.p.....	140,000	....	140,000	140,400
*Died May, 1956				

AIRLINES

AMERICAN AIRLINES, INC.				
C. R. Smith, pres.....	\$75,000	....	\$75,000	\$73,185
Wm. J. Hogan, senior v.p.....	55,000	....	55,000	47,707
C. W. Jacob, senior v.p.....	55,000	....	55,000	47,707
TRANS WORLD AIRLINES, INC.				
*R. S. Damon, pres.....	\$107,114**	\$15,330	\$122,444	\$103,934
Warren Lee Pierson, chm.....	75,509**	13,526	89,035	89,837
John A. Collings, ex. v.p.....	56,769**	10,666	67,435	61,248
*Died Jan. 4, 1956; **Includes retirement payments of \$11,115; \$9,610; and \$7,969 respectively.				
UNITED AIR LINES, INC.				
Wm. A. Patterson, pres.....	\$100,000	....	\$100,000	\$100,000
J. A. Herlihy, v.p.....	46,000	....	....	44,000
*Otis E. Kline, v.p.....	45,000	....	....	45,000
*Resigned Jan. 31, 1956.				

APPAREL

CLUETT, PEABODY & CO.				
Barry T. Leithhead, pres.....	\$104,563	\$53,000*	\$157,563	\$105,443
Robert M. Dowling, v.p.....	56,992	35,841*	82,833	52,359
Robert L. Palmer, v.p.....	50,000	20,813*	70,813	51,081
*Amounts paid or payable under incentive pay plan for awards made for 1952-1954-1955. Paid in 5-year or 10-year installments after termination of employment.				
HART, SCHAFFNER & MARX				
Meyer Kestnbaum, pres.....	\$100,100	....	\$100,100	\$100,000
John D. Gray, v.p.....	54,580	....	54,580	54,580
Morris Greenberg, v.p.....	50,000	....	50,000	50,000

AUTO PARTS

BENDIX AVIATION CORP. (year ended Sept. 30)				
M. P. Ferguson, pres.....	\$142,749*	....	\$142,749	\$140,349
Charles Marcus, v.p.....	90,300*	....	90,300	88,950
R. P. Lansing, v.p.....	85,300*	....	85,300	....
*Supplemental pay plan awards over \$3,000 paid in four annual installments. Payments included here are 25% of awards for 1952, 1953, and 1954.				
BORG-WARNER CORP.				
R. C. Ingersoll, chm. & pres.....	\$101,000*	\$31,250**	\$131,250	\$144,101
R. S. Ingersoll, adm. v.p.....	48,270***	34,000**	82,270	....
E. S. Russey, Warner Gear pres.....	85,169***	50,000**	135,169	....
*\$84,100 corporation paid, balance payments under contributory retirement income plan purchased by company contributions.				
**Payments in 1954 under contingent compensation plan.				
***Includes \$4,570 and \$9,169 retirement pay respectively.				

(Continued on page 106)

Torqmatic makes the load go faster

CALL THE ROLL of leading shovel-type loaders and you'll find that almost every one of them — like Payloader, Trojan, Napco, Speedall and Scoopmobile — uses Allison TORQMATIC DRIVES in both gasoline- and Diesel-powered loaders.

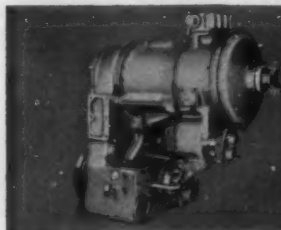
And the reason is simple — the *integrated* Allison TORQMATIC Converter-Transmission team helps manufacturers build a better loader — gives their customers an easier-operating, faster-working tool that costs less to run and maintain.

For the completely self-contained TORQMATIC DRIVE frees drivers from clutch-pedal pushing — eliminates

about half the work in running a shovel-type loader.

The TORQMATIC CONVERTER permits quick-shifts of *all ranges* at full throttle without slowing down — broadens the engine's useful horsepower range by tripling engine torque for faster, more efficient digging and hauling. And "sense-feel" hydraulic control enables the operator to feel the load pick-up when reversing direction.

If you'd build or buy a better shovel-type loader, take a TORQMATIC tip from the leading manufacturers—specify Allison TORQMATIC DRIVES. For full details write to Allison Division of General Motors, Box 894B, Indianapolis 6, Indiana.



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PRODUC-TROL Visual Control

not only schedules,

But automatically checks
with TIME, LINE
and COLOR control



- Original cost and upkeep low.
- Schedules and time checks operations.
- Historical record to back it up.
- Bad situations show automatically.
- Its simplicity has put it into world-wide use.
- Analyze 100 items in 10 seconds.

Effective Tools for
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WASSELL ORGANIZATION, INC.
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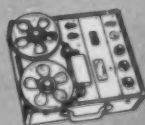
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UNIFORMLY

if they're powered with

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MOTORS**

"Smooth running, trouble-free Bodine motors provide our tape recorders with torque characteristics that are uniform from motor to motor."—Ampex Corp.



Talk to a Bodine motor application engineer in the early stages of planning your product. You'll save needless experimentation, and may find one of Bodine's 3500 standard motors ideally suited.

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BODINE
fractional / horsepower
MOTORS

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Ernest R. Breech, Ford chairman, got \$185,000 salary, plus \$380,000 incentive bonus.



Henry Ford II, Ford president, was top-paid officer in firm along with Ernest Breech.

THOMPSON PRODUCTS, INC.

	Salary	Bonus
F. C. Crawford, chm.....	\$155,450	....
J. D. Wright, pres.....	141,500	....
J. H. Coolidge, v.p.....	85,300	....

AUTOMOBILES

CHRYSLER CORP.

K. T. Keller, chm.....	\$301,000	....	\$301,000	\$300,900
L. L. Colbert, pres.....	250,900	249,800*	500,700	250,900
James C. Zeder, v.p.....	120,400	149,600*	270,000	115,450

*Awards under incentive compensation plan payable in five equal installments, if earned out; one-fifth of this amount earned out Dec. 31 and payable on or before March 15.

FORD MOTOR CO.

Ernest R. Breech, chm.....	\$185,000	\$380,000*	\$565,000	....
Henry Ford II, pres.....	185,000	380,000*	565,000	....
Lewis D. Crusoe, ex. v.p.....	150,000	340,000*	490,000	....
Delmar S. Harder, ex. v.p.....	150,000	340,000*	490,000**	....
Benson Ford, v.p.....	120,000	200,000*	320,000**	....

*Supplemental compensation payable in three installments, if earned out, one-fourth March, 1956; one-half, January, 1957; one-fourth, January, 1958.

**Plus \$35,417 and \$177,208, respectively, in pension payments

GENERAL MOTORS CORP.

Harlow H. Curfice, pres.....	\$201,400	\$575,000*	\$776,400	\$686,000
Albert Bradley, chm.....	176,525	515,000*	701,525	611,500
Louis G. Goetz, ex. v.p.....	146,300	450,000*	596,300	522,033
Frederic G. Donner, ex. v.p.....	146,300	450,000*	596,300	516,300

*Bonus payable in five equal installments; include, respectively, 1,985 shares of stock valued at \$77,713; 1,832 at \$71,723; 1,666 at \$65,224; 1,666 at \$65,224.

BAKING & MILLING

CONTINENTAL BAKING CO.

R. N. Laughlin, pres.....	\$91,000	....	\$91,000	\$88,000
Cedric Seaman, v.p.....	49,400	....	49,400	48,200
George Faunce Jr., v.p.....	46,800	....	46,800	45,600

GENERAL MILLS, INC.

Harry A. Bullis, chm.....	\$112,000	....	\$112,000*	\$118,000
Charles H. Bell, pres.....	102,500	....	102,500*	108,000
Walter R. Barry, v.p.....	86,000	....	86,000*	92,000

*Plus \$12,000, \$12,500, and \$11,000 in deferred pay after retirement and \$4,346, \$3,977, and \$3,337 in pension payments.

NATIONAL BISCUIT CO.

George H. Coppers, pres.....	\$129,200	....	\$129,200	\$126,800
Roy E. Tomlinson, chm.....	94,000	....	94,000	91,600
Edward S. Moore, ex. v.p.....	75,400	....	75,400	73,400

PILLSBURY MILLS, INC. (Year ended May 31)

Philip W. Pillsbury, chm.....	\$95,173	....	\$95,173	\$87,893
Paul S. Gerat, pres.....	109,815	....	109,815	101,415
R. J. Keith, v.p.....	58,408	....	58,408	49,514
Howard W. Files, v.p.....	46,855	....	46,855	43,271

SUNSHINE BISCUITS, INC.

Hanford Main, pres.....	\$100,000	....	\$100,000	\$100,000
M. G. Johanning, ex. v.p.....	65,000	....	65,000	65,000
R. H. Schust, v.p.....	54,000	....	54,000	54,000

BEVERAGES & CANDY

COCA-COLA CO.

H. B. Nicholson, chm.....	\$125,700	....	\$125,700	\$126,300
Felix W. Coste, v.p.....	70,000	....	70,000	70,000
*Wm. E. Robinson, pres.....	102,225	....	102,225	....

*In hiring Robinson as president company agreed in addition to salary to (1) deferred pay plan of \$25,000 for each year's service to be paid annually one year after termination as executive officer; and (2) stock option plan for purchase up to 25,000 shares at \$117.25 a share for five years beginning Feb. 5, 1955.

HERSHEY CHOCOLATE CORP.

P. A. Staples, chm. & pres.....	\$75,000	....	\$75,000	\$75,000
J. J. Gallagher, v.p.....	41,146*	....	41,146	40,000

*Includes \$1,416 insured retirement annuity plan.

(Continued on page 108)

Whatever your business may be... you can save money with stapling

Below you see five of the vast number of businesses which report savings with Bostitch stapling. In shipping, Bostitch provides quick, easy carton closures—on seams, tops and bottoms—that actually strengthen the cartons. In production, everything from paper to sheet metal is fastened with Bostitch equipment—

speeding output, cutting costs. A Bostitch Economy Man will be glad to help with your fastening problems. He's one of 350 trained fastening specialists working out of 123 cities in the U. S. and Canada. Over 800 different models of Bostitch staplers and 200 types of staples can be tailored to the job.



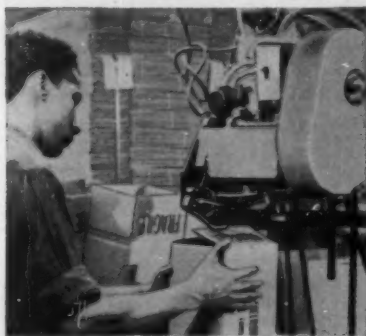
Electrically operated Bostitch stapler bags hardware parts twice as fast as hand stapler. "Savings in labor alone, 50%."



Roofers use Bostitch heavy-duty stapling hammers to lay asphalt shingles on new roofs. "Four times faster than nailing."



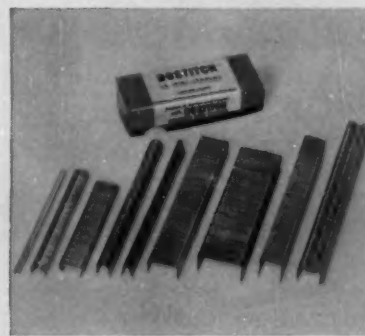
Air freight bills stapled to corrugated containers with new-type Bostitch tackler "hold better than with tape at 1/10th the cost."



"Twice as many boxes can be stapled in an hour, with only two thirds as much manpower." Staplers also take up less floor space.



With Bostitch Autoclensh stapler, this man says he seals boxes "five times faster" than he can with glue. Saving "over 50%."



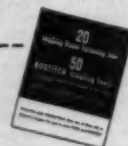
For greatest savings and smoothest operation, use only genuine Bostitch staples in all Bostitch stapling machines. They're precision-made to work together.

Fasten it better and faster with

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STAPLERS AND STAPLES

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From Maine to California NEW Mercury Automatic Clutches solve power transmission problems for manufacturers of electrically-operated equipment by helping smaller motors do bigger jobs. Low Cost Mercury Clutches permit the use of standard motors, give constant overload protection, reduce fire hazards and lengthen power unit life. By easing starting current demand, so needed in older, insufficiently wired homes, they turn cool customers into hot prospects—for your product. Write today for information on Mercury's NEW clutches for both electric and gasoline powered equipment.



Mercury Clutch Division
Automatic Steel Products, Inc.
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Crawford Greenewalt, du Pont president, was fourth highest paid executive at \$642,619.



Charles A. Thomas, Monsanto president, got pay boost putting him at \$220,000.

BUILDING MATERIALS

	Salary	Bonus	1953 Total	1954 Total
CRANE CO.				
*J. L. Holloway, pres.....	\$41,867	....	\$41,867	\$114,600
L. N. Blugerman, v.p.....	63,050	....	63,050	53,500
*F. F. Elliott, pres.....	82,500	....	82,500	....
*Holloway president until May 31, 1955.				
JOHNS-MANVILLE CORP.				
L. M. Cassidy, chm.....	\$133,367*	\$37,543	\$170,910	\$154,044
A. R. Fisher, pres.....	108,546*	30,034	138,580	123,175
C. F. Rossweller, v.p.....	82,202*	22,826	105,028	....
*Includes \$6,367, \$7,046, and \$4,702 retirement payments respectively.				
U. S. GYPSUM CO.				
C. H. Shaver, chm.....	\$115,913	....	\$115,913	\$100,000
Oliver M. Knoda, pres.....	90,000	....	90,000	90,000
H. F. Sadler, v.p.....	75,000	....	75,000	75,000

CHEMICALS

ALLIED CHEMICAL & DYE CORP.				
F. J. Emmerich, pres.....	\$125,000	....	\$125,000	\$125,000
*E. W. Clark, v.p.....	69,922	....	69,922	85,000
Glen. B. Miller, v.p.....	82,500	....	82,500	80,000
Forbes Silsby, v.p.....	72,500	....	72,500	....
*Retired Sept. 30, 1955.				
AMERICAN CYANAMID CO.				
K. C. Towe, pres.....	\$90,000	\$80,032	\$170,032*	\$284,828
W. G. Malcolm, v.p.....	63,500	41,911	105,411*	136,060
S. C. Moody, v.p.....	63,500	41,911	105,411*	136,060
*Plus 2,929 shares, 1,177 shares, and 1,177 shares, respectively, of common stock payable on termination of employment under plan adopted in 1955.				
DOW CHEMICAL CO.				
Leland I. Dean, pres.....	\$137,808	....	\$137,808	\$137,808
Earl W. Bennett, chm.....	99,222	....	99,222	99,222
Mark E. Putnam, ex. v.p.....	107,490	....	107,490	107,490
E. I. DU PONT DE NEMOURS & CO.				
Crawford H. Greenewalt, pres.....	\$178,619	\$464,000	\$642,619	\$569,056
Walter J. Beadle, v.p.....	94,219	283,000	377,219	339,800
Walter Dannenbaum, v.p.....	91,200	283,000	374,200	337,226
Henry B. DuPont, v.p.....	97,650	283,000	380,650	....
EASTMAN KODAK CO.				
Thomas J. Hargrave, chr.....	\$209,852	....	\$209,852	\$208,791
Albert K. Chapman, pres.....	207,184	....	207,184	203,977
Donald McMaster, v.p.....	138,333	....	138,333	126,063
FOOD MACHINERY & CHEMICAL CORP.				
Paul L. Davies, pres.....	\$60,000	\$53,903	\$113,903	\$102,000
B. C. Carter, ex. v.p.....	33,000	17,270	50,270	46,639
James M. Hart, v.p.....	30,000	27,650	57,650	....
Ernest Hart, v.p.....	38,000	16,000	54,000	....
MONSANTO CHEMICAL CO.				
Charles A. Thomas, pres.....	\$220,000	....	\$220,000	\$160,000
Robert R. Cole, ex. v.p.....	170,000	....	170,000	115,000
Carroll A. Hochwalt, v.p.....	150,000	....	150,000	105,000
UNION CARBIDE & CARBON CORP.				
Morse G. Dial, pres.....	\$262,500	....	\$262,500*	\$225,000
Howard S. Bunn, ex. v.p.....	143,333	....	143,333*	120,000
Kenneth H. Hannan, v.p.....	85,000	....	85,000*	....
*Plus \$83,386, \$56,984, and \$34,140 under contributory and non-contributory pension and retirement plans.				

CIGARETTES

AMERICAN TOBACCO CO.				
Paul M. Hahn, pres.....	\$120,000	\$152,724	\$272,724	\$255,502
*Preston L. Fowler, v.p.....	50,000	122,179	172,179	158,402
Richard J. Baylan, v.p.....	50,000	122,179	172,179	....
*Retired April 4, 1956.				
LIGGETT & MYERS TOBACCO CO.				
B. F. Few, pres.....	\$55,000	\$180,395	\$235,395	\$207,030
W. A. Blount, v.p.....	44,000	108,237	152,237	135,218
J. N. Wellman, v.p.....	40,000	108,237	148,237	131,218

(Continued on page 110)

Carpenter ... pioneers in specially-engineered steels through continuing research



HOW FAR CAN YOU GO

in stepping up production of critical parts?

Production of these stainless steel spuds used in electric and gas water heaters was fairly satisfactory when they were made from an ordinary stainless steel. But someone in the plant wasn't satisfied . . . and took time to explore the possibilities for improvement.

Hearing about the easier machinability of a special modified stainless made by Carpenter, the order to change steels went through. Now production is up 30% . . . and rigid requirements involving close tolerances, cleanliness, and corrosion resistance are met with an extra margin of safety.

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ment problems almost 70 years' experience in the development of new and improved specialty steels.

One move can get you started in the right direction. Write for a copy of our 36-page booklet, "A Guide to Specialty Steels as Made by Carpenter." The Carpenter Steel Co., 140 W. Bern St., Reading, Pa.

Are you taking advantage of these specially-engineered steels as made by Carpenter?

Matched Tool and Die Steels / Stainless Steels / Special Purpose Alloy Steels / Silicon and High Nickel Alloys / Valve, Heat-Resisting and Super Alloy Steels / Tubing and Pipe / Fine Wire Specialties

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for product improvement





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"Here at **SKF**, we are known worldwide for the quality and precision of our ball and roller bearings. And we recognize *quality and precision* in the products of leaders in other fields. We know that Hamilton, like **SKF**, stands for top quality and that our employees really value this dependable gift of lifelong usefulness."

Yes, **SKF** is one of the hundreds of blue-ribbon American companies who know that HAMILTON, the blue-ribbon American watch, is the employee award which "rewards" the employer most.

Hamilton Watches are awarded by more companies than all other makes combined. You can benefit from Hamilton's vast experience and cooperation. You'll find many helpful suggestions in the 28-page booklet entitled "How to Get the Most from an Employee Award Program." Just mail this coupon today on your company letterhead.

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☐ Please mail me a copy of your booklet, "How to Get the Most from an Employee Award Program."

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COMPANY _____
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CITY _____ ZONE _____ STATE _____



Theodore G. Montague, Borden Co. president, took a pay cut to \$132,950.

Neil McElroy, Procter & Gamble president, entered the over \$300,000-a-year bracket.



	Salary	Bonus	1955 Total	1954 Total
R. J. REYNOLDS TOBACCO CO.				
John C. Whitaker, chm.....	\$168,189	....	\$168,189	\$184,760
E. A. Darr, pres.....	121,032	....	121,032	124,220
Bowman Gray, ex. v.p.....	95,800	....	95,800	107,320
PHILIP MORRIS & CO.				
O. Parker McComas, pres.....	\$100,160	....	\$100,160	\$93,160
*L. G. Hansom, senior v.p.....	50,120	....	50,120	50,600
W. H. Hatcher, v.p.....	50,000	....	50,000	49,500
C. T. Ames, Jr., v.p.....	50,000	....	50,000	49,500
*Retired March 1, 1956.				

COMMUNICATIONS

AMERICAN TELEPHONE & TELEGRAPH CO.				
Cleo F. Craig, pres.....	\$217,119	....	\$217,119	\$206,800
Hal S. Dumas, ex. v.p.....	157,995	....	157,995	156,920
Wm. C. Bolensius, v.p.....	\$99,900	....	99,900	97,250
GENERAL TELEPHONE CORP.				
Donald C. Power, pres.....	\$105,208	....	\$105,208	\$86,250
Thomas A. Boyd, v.p.....	43,124	....	43,124	35,416

CONTAINERS

AMERICAN CAN CO.				
Wm. C. Stolk, pres.....	\$157,000	....	\$157,000	\$158,400
Russell C. Taylor, v.p.....	93,200	....	93,200	92,800
CONTINENTAL CAN CO.				
Lucius D. Clay, chm.....	\$108,000	\$42,000*	\$150,000	\$150,443
Hans A. Eggors, pres.....	96,000	20,375**	116,375	116,486
Thomas C. Fogarty, ex. v.p.....	102,500	10,180**	112,680	....
*Deferred remuneration payable under employment contract after termination of employment for five or 10-year period.				
**Deferred remuneration, including 250 shares and 150 shares, respectively, valued at \$9,719 and \$4,665 payable after termination over 5 or 10 years.				
CONTAINER CORP. OF AMERICA				
Walter P. Paspecke, chm.....	\$100,000	\$85,000*	\$185,000	\$185,000
Wesley M. Dixon, pres.....	85,865**	45,000*	130,865	125,000
John V. Spachner, ex. v.p.....	80,490**	40,000*	120,490	115,000
*Includes \$10,000, \$8,000, and \$7,500 respectively contributed to "The Container Common Stock Trust" for benefit of all salaried employees.				
**Includes \$5,865 and \$5,490 respectively in retirement payments.				

DAIRY PRODUCTS

BORDEN CO.				
Theodore G. Montague, pres.....	\$132,950	....	\$132,950	\$150,500
Harold W. Comfort, ex. v.p.....	91,900	....	91,900	109,450
Roy D. Wooster, v.p.....	75,100	....	75,100	86,485
NATIONAL DAIRY PRODUCTS CORP.				
E. E. Stewart, pres.....	\$183,247	....	\$183,247	\$171,760
L. A. Van Bomel, chm.....	89,160*	....	89,160	101,960
G. C. Pound, v.p.....	111,360	....	111,360	111,380
*Includes \$25,000 annuity payments under plan started in 1951.				

DEPARTMENT STORES

FEDERATED DEPT. STORES, INC.				
No proxy filed; notice sent to stockholders announcing vote on splitting shares.				
R. H. MACY & CO. (Year ended Aug. 1)				
Jack I. Straus, pres.....	\$135,420	....	\$135,420	\$135,000
Edwin F. Chinlund, v.p.....	110,420	....	110,420	110,340
MAY DEPT. STORES CO. (Year ended Jan. 31)				
Morton D. May, pres.....	\$128,592	....	\$128,592	\$118,641
Morton J. May, chm.....	100,250	....	100,250	100,250
Leo J. Wieck, v.p.....	94,371	....	94,371	89,445

DISTILLERS

DISTILLERS CORP.-SEAGRAMS, LTD. (Year ending July 31)				
Samuel Bronfman, pres.....	\$355,000	....	\$355,000	\$353,750
Allan Bronfman, v.p.....	202,500	....	202,500	201,875

(Continued on page 114)



When the Climate Man is first in line...nobody complains!

Production, finance, sales—they're glad to wait while the Worthington CLIMATE MAN bends the boss's ear.

It takes the CLIMATE MAN just a short time to show how a Worthington air conditioning system fits into his operation and pays off for everybody—in better employee morale, stepped-up production, a zippier sales force.

Ask your Worthington CLIMATE MAN to show *you* how. In full-color transparencies you'll see how a Worthington air conditioning system fits neatly into *your* scheme of things. You'll see the compact, packaged unit, and the remarkable adaptability of the new FLEXI-COOL add-on units—they mount vertically, horizontally, even hang from the ceiling! And you'll see for yourself how Worthington viscous-type, throwaway filters remove dust, pollen or production-fouling particles from the air—especially important where precision machinery is at work.

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The Daybrook Division of Layco is also a major source of hydraulic power units to suppliers and manufacturers in the field of transportation and materials handling.

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SPRING & WIRE CORPORATION



DAYBROOK HYDRAULIC DIVISION



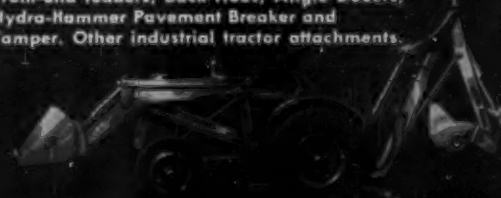
OTTAWA STEEL DIVISION

SPRING & WIRE DIVISION
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OTTAWA STEEL DIVISION
Tracto-Lift heavy duty lift trucks. Up to 15,000 lbs. capacity. 7½ to 25 ft. lift. High ground clearance.

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Front-end loaders, Back Hoes, Angle Dozers, Hydra-Hammer Pavement Breaker and Tamper. Other industrial tractor attachments.



FORMS



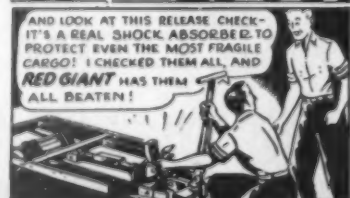
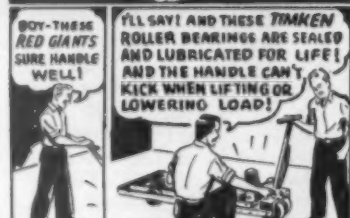
STANDARD STOCK SNAP-APART SETS

CARBON-INTERLEAVED

- CHECK LIST AND WRITE FOR SAMPLES AND PRICES
- ☐ BILLS OF LADING
 - ☐ INVOICE SETS
 - ☐ STATEMENT SETS
 - ☐ VOUCHER CHECKS
 - ☐ REQUEST FOR QUOTATION
 - ☐ PURCHASE ORDER SETS
 - ☐ RECEIVING & REQ. FORMS
 - ☐ SALES ORDER SETS
 - ☐ CORRESPONDENCE SETS
 - ☐ W-2 TAX FORMS
 - ☐ SNAP-ADDRESS LABELS
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- Imprinted with Your Name, etc.

10 Day Shipment—Low Prices

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PLANT: N. Y. CITY, NEWARK,
BELLEVILLE & CLIFTON, N. J.



REVOLVATOR CO.
8711 Tonnelle Ave., North Bergen, N. J.



Gwilym A. Price, Westinghouse president, took pay cut to \$123,541 caused by strike.



Ralph J. Cordiner, General Electric president, got \$247,515, was allocated 2,261 shares (of stock.)

	Salary	Bonus	1955 Total	1954 Total
NATIONAL DISTILLERS PRODUCTS CORP.				
John E. Bierwirth, pres.....	\$197,773	.....	\$197,773*	\$192,865
B. C. Ohlandt, v.p.....	99,621	.....	99,621*	81,515
R. E. Hulse, v.p.....	70,519	.....	70,519*	.....
*Plus 2,260 shares, 1,130 shares, and 878 shares of common stock, payable in 10 equal installments at termination of employment.				
DRUGS				
ABBOTT LABORATORIES				
Ernest H. Volwiler, pres.....	\$88,122	\$853*	\$88,975	\$85,000
James F. Stiles, Jr., chm.....	73,653	853*	74,506	71,000
George R. Cain, v.p.....	62,137	673*	62,810	.....
*Stock bonus plan.				
BRISTOL-MYERS CO. (Year ending June 1)				
Lee H. Bristol, pres.....	\$113,664*	.....	\$113,664	\$86,937
Henry P. Bristol, chm.....	84,000	.....	84,000	78,000
Wm. M. Bristol, ex. v.p.....	95,025*	.....	95,025	73,646
*Includes \$13,864 and \$10,325, respectively, retirement income payments.				
REXALL DRUG, INC.				
J. W. Dart, pres.....	\$81,565*	.....	\$81,565	\$75,000
W. T. Lillie, v.p. & treas.....	48,623*	.....	48,623	43,000
C. E. Cooper, v.p.....	52,088*	.....	52,088	56,000
*Includes \$6,565, \$3,623, and \$4,588 profit-sharing retirement trust.				
STERLING DRUG, INC.				
James Hill Jr., chm.....	\$151,454*	.....	\$151,454	\$131,354
J. Mark Hiebert, pres. & ex. v.p.....	81,200	.....	81,200	68,600
E. I. McClintock, v.p.....	70,800	.....	70,800	70,750
*Includes \$20,000 paid under 1946 deferred compensation, payable for eight years starting July 1, 1954.				

ELECTRICAL EQUIPMENT & APPLIANCES

AVCO MFG. CORP. (Year ending Nov. 30)				
Victor Emanuel, chm. & pres.....	\$125,000	.....	\$125,000	\$125,000
*W. A. Magensan, v.p.....	75,000	.....	75,000	75,000
James D. Shouse, v.p.....	75,000	.....	75,000	.....
*Resigned Nov. 30, 1953.				
GENERAL ELECTRIC CO.				
Ralph J. Cordiner, pres.....	\$247,515	.....	\$247,515*	\$218,726
Philip D. Reed, chm.....	157,489	.....	157,489*	150,015
Henry V. Erben, ex. v.p.....	132,514	.....	132,514*	146,365
*Plus, respectively, 2,261 shares, 1,357 shares, and 1,055 shares of stock valued at \$49.75 a share payable in 15 to 20 annual installments after termination of employment, if earned out.				
WESTINGHOUSE ELECTRIC CORP.				
Gwilym A. Price, pres.....	\$123,541	.....	\$123,541	\$106,050
L. E. Osborne, vice chm.....	88,750	.....	88,750	131,150
Mark W. Cresap, Jr., ex. v.p.....	80,416	.....	80,416	115,093

FOOD PRODUCTS

CORN PRODUCTS REFINING CO.				
Ernest W. Reid, chm.....	\$80,000	.....	\$80,000	\$80,000
Wm. T. Brady, pres.....	60,000	.....	60,000	60,000
Wm. H. Gamble, senior v.p.....	60,000	.....	60,000	60,000
GENERAL FOODS CORP. (Year ended March 31)				
*Austin S. Ingleheart, chm.....	\$80,010	\$45,000	\$125,010	\$168,000
Charles G. Mortimer, pres.....	131,250	75,000	206,250	150,000
George Hampton, ex. v.p.....	73,625	42,000	115,625	.....
*Resigned as chairman Nov. 4, 1954.				
STANDARD BRANDS, INC.				
Joel S. Mitchell, pres.....	\$125,000	.....	\$125,000	\$125,000
Albert Fleischmann, v.p.....	75,000	.....	75,000	62,500
Leonard G. Reichard, v.p.....	73,750	.....	73,750	60,000

GLASS

HAZEL-ATLAS GLASS CO.				
J. H. McNash, pres.....	\$50,000	.....	\$50,000	\$50,000
OWENS-ILLINOIS GLASS CO.				
J. P. Lewis, chm.....	\$135,000	.....	\$135,000	\$135,000
C. R. Megowan, pres.....	125,000	.....	125,000	125,000
H. C. Laughlin, ex. v.p.....	96,894*	96,894	90,000
*Includes \$6,894 pension payment.				

(Continued on page 116)

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BRIDGEPORT (Montgomery County), PA.



John A. Barr, head of Montgomery Ward succeeding Sewell Avery, made \$75,961 his first year.



William Robinson, Coca-Cola president, took over the job at \$102,225 salary plus deferred pay, options.

	Salary	Bonus	1955 Total	1954 Total
PITTSBURGH PLATE GLASS CO.				
H. B. Higgins, pres.....	\$170,116	....	\$170,116	\$170,116
R. B. Tucker, v.p.....	101,850	....	101,850	123,600
C. M. Brown, chm.....	89,718	....	89,718	131,718
David G. Hill, v.p.....	107,034*	....	107,034	....

*Includes \$12,034 in deferred profit-sharing.

	Salary	Bonus	1955 Total	1954 Total
GROCERY CHAINS				
KROGER CO.				
Joseph B. Hall, pres.....	\$175,000	....	\$175,000	\$178,365
Jacob E. Davis, v.p.....	70,769	1,966	72,735	69,763
Wm. E. Carter, v.p.....	70,769	1,966	72,735	69,763
SAFEWAY STORES, INC.				
*Milton L. Selby, pres.....	\$60,000	\$65,320**	\$125,320	\$128,651***
C. N. Sanders, v.p.....	60,000	65,320**	125,320	128,651
Dwight Edwards, v.p.....	60,000	65,320**	125,320	....

*Elected president Oct. 3; **Includes profit-sharing contribution; ***Limon Worren paid \$301,525 in 1954.

	Salary	Bonus	1955 Total	1954 Total
INDUSTRIAL MACHINES				
BARCOCK & WILCOX CO.				
Alfred Iddles, pres.....	\$107,800	....	\$107,800	\$107,800
Edward A. Livingstone, v.p.....	63,750	....	63,750	57,200
M. Nielsen, ex. v.p.....	69,750	....	69,750	57,717
CATERPILLAR TRACTOR CO.				
L. B. Neumiller, chm.....	\$121,250	....	\$121,250	\$110,000
H. S. Eberhard, pres.....	109,948*	....	109,948	99,585
A. T. Brown, v.p.....	100,888*	....	100,888	90,571

*Includes \$12,488 and \$17,130, respectively, under retirement plan.

	Salary	Bonus	1955 Total	1954 Total
DRESSER INDUSTRIES, INC.				
H. N. Mallon, pres.....	\$122,996	....	\$122,996	\$106,821
J. B. O'Connor, ex. v.p.....	114,954	....	114,954	92,821

	Salary	Bonus	1955 Total	1954 Total
MAIL ORDER HOUSES				
SEARS, ROEBUCK & CO.				
Fowler B. McConnell, pres.....	\$135,000	\$1,820*	\$136,820	\$135,000
Theodore V. Houser, chm.....	135,000	1,820*	136,820	133,846
Edward Gudeman, v.p.....	98,751	1,365*	100,116	90,000

*Profit-sharing plan.

	Salary	Bonus	1955 Total	1954 Total
MONTGOMERY WARD & CO.				
Sewell Avery, chm.*	\$93,067	....	\$93,067	....
John A. Barr, chm. & pros.**	75,961	....	75,961	....
James A. Webber, v.p.....	60,000	....	60,000	....

*Resigned May 9, 1955; **Succeeded Avery May 12.

	Salary	Bonus	1955 Total	1954 Total
MEAT PACKING				
ARMOUR & CO.				
Frederick W. Specht, pres.....	\$125,000	....	\$125,000	\$129,000
*Harry S. Eldred, ex. v.p.....	35,962	....	35,962	88,900
Robert E. Pearsall, ex. v.p.....	75,000	....	75,000	....

*Retired April 2, 1955.

	Salary	Bonus	1955 Total	1954 Total
SWIFT & CO.				
John Holmes, chm.....	\$125,000	....	\$125,000	\$125,000
Porter M. Jarvis, pres.....	95,000	....	95,000	80,000
O. E. Jones, ex. v.p.....	80,000	....	80,000	80,000

	Salary	Bonus	1955 Total	1954 Total
NON-FERROUS METALS				
ALUMINUM CO. OF AMERICA				
I. W. Wilson, pres.....	\$210,000	....	\$210,000	\$200,000
F. L. Magee, ex. v.p.....	130,000	....	130,000	110,000
Leon E. Hickman, v.p.....	116,500	....	116,500	107,000

	Salary	Bonus	1955 Total	1954 Total
AMERICAN SMELTING & REFINING CO.				
Roger W. Straus, chm.....	\$104,115	....	\$104,115*	\$103,071
Kenneth C. Brownell, pres.....	84,722	....	84,722*	77,333
R. F. Goodwin, v.p.....	67,805	....	67,805*	67,156

*Plus 177 shares for Straus, 133 for Brownell, and 115 for Goodwin valued at \$45 a share under contingent pay plan; in addition each got \$1,821, \$1,364, and \$1,183, respectively, as dividend equivalents on contingent allotments.

(Continued on page 118)

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FENCE

	Salary	Bonus	1953 Total	1954 Total
ANACONDA CO.				
*Cornelius F. Kelley.....	\$135,019	\$135,019	\$201,418
Robert E. Dwyer, pres.....	151,851	....	151,851	152,016
**Roy H. Glover.....	157,765	....	157,765	....
E. S. McGlone ex. v.p.....	89,643	....	89,643	....
*Retired as chairman, May, 1955; **new chairman of board.				
KENNECOTT COPPER CORP.				
Charles R. Cox, pres.....	\$191,900	....	\$191,900	\$192,120
Frank R. Milliken, v.p.....	75,200	....	75,200	60,220
NATIONAL LEAD CO.				
Joseph A. Martino, pres.....	\$197,500	\$29,625*	\$227,125	\$211,562
Herman T. Warshaw, v.p.....	101,250	15,187*	116,437	116,437
Alfred H. Drewes, v.p.....	93,750	13,312*	107,063	....
*Profit-sharing plan.				
PHELPS-DODGE CORP.				
Louis S. Cates, chm.....	\$86,300	\$40,000*	\$114,300	\$161,700
Robert G. Page, pres.....	126,000	62,500*	188,500	146,900
*Includes \$10,000 and \$12,300 respectively in deferred profit-sharing retirement income.				
REYNOLDS METALS CO.				
*R. S. Reynolds, Sr., chm.....	\$87,760	....	\$87,760	\$159,089
R. S. Reynolds Jr., pres.....	142,317**	....	142,317	128,686
***M. M. Caskie, ex. v.p.....	129,429**	....	129,429	120,449
*Died July, 1955.				
**Includes \$16,532 and \$19,303, respectively, in pension benefits.				
***Retired Dec. 31, 1955.				

OFFICE MACHINES & EQUIPMENT

INTERNATIONAL BUSINESS MACHINES CORP.				
Thomas J. Watson, chm.....	\$100,000	\$246,590	\$346,590*	\$306,953
Thomas J. Watson Jr., pres.....	154,496	....	154,496*	132,419
John G. Phillips, vice chm.....	149,523	....	149,523*	152,107
Albert L. Williams, ex. v.p.....	111,235	....	111,235*	93,090
*Plus \$2,390, \$2,960, \$2,574, and \$2,859, pension payments, respectively.				
NATIONAL CASH REGISTER CO.				
Stanley C. Allyn, pres.....	\$240,000	....	\$240,000	\$240,000
Robert S. Gelman, ex. v.p.....	135,000	....	135,000	135,000
Edward A. Deeds, chm.....	59,167	....	59,167	100,000
REMINGTON RAND, INC.*				
James H. Rand, pres.....	\$202,100	....	\$202,100	\$202,100
Douglas MacArthur, chm.....	68,600	....	68,600	....
Harry Landsiedel, ex. v.p.....	81,600	....	81,600	....
*Now a division of Sperry Rand Corp.				

OIL COMPANIES

ATLANTIC REFINING CO.				
Henderson Supplee Jr., pres.....	\$100,000	....	\$100,000	\$96,666
D. T. Colley, v.p.....	64,000	....	64,000	61,000
L. A. Sunkel, v.p.....	57,000	....	57,000	55,000
CITIES SERVICE CO.				
W. Alton Jones, chm.....	\$150,520	\$3,744*	\$154,264	\$150,860
Burl S. Watson, pres.....	127,120	3,120*	130,240	127,130
**Singer S. Ireland.....	76,633	1,899*	78,532	70,900
*Thrift plan contribution; **president of Cities Service Oil Co. (Dele.).				
CONTINENTAL OIL CO.				
L. F. McCollum, pres.....	\$126,500	....	\$126,500	\$125,800
E. F. Battson, v.p.....	83,900*	....	83,900	76,650
Ira H. Cram, v.p.....	83,150*	....	83,150	76,050
*Includes \$2,250 thrift retirement plan.				
GULF OIL CORP.				
S. A. Swensrud, chm.....	\$150,000	\$50,025*	\$200,025	\$275,000
W. K. Whiteford, pres.....	175,000	87,522*	262,522	300,000
David Proctor, ex. v.p.....	100,000	62,553*	162,553	185,000
*Incentive compensation plan.				
PHILLIPS PETROLEUM CO.				
K. S. Adams Sr., chm.....	\$175,500	....	\$175,500	\$175,000
Paul Endacott, pres.....	125,833	....	125,833	110,000
Stanley Learned, ass't. to pres.....	115,833	....	115,833	110,000
PURE OIL CO.				
Rawleigh Warner, chm.....	\$87,124*	....	\$87,124	\$76,875
R. L. Milligan, pres.....	76,875*	....	76,875	59,709
*Includes \$2,124 and \$1,875, respectively, under savings plan.				
RICHFIELD OIL CORP.				
H. F. Sinclair, chm.....	60,250	....	\$60,250	\$60,500
Charles S. Jones, pres.....	126,250	....	126,250	126,250
SHELL OIL CO.				
H. S. M. Burns, pres.....	\$175,000	....	\$175,000	\$175,000
A. J. Galloway, v.p.....	100,000	....	100,000	95,000
James H. Daalittle, v.p.....	90,000	....	90,000	90,000
SINCLAIR OIL CORP.				
P. C. Spencer, pres.....	\$165,083	....	\$165,083	\$150,800
*M. L. Gasney, chm.....	102,316	....	102,316	90,390
**P. W. Thirtle, v.p.....	49,249	....	49,249	75,750
W. F. Dair, v.p. & treasurer.....	55,550	....	55,550	....
*Made chairman May, 1955; **retired June, 1955.				

(Continued on page 120)



This 55-ton high-temperature, controlled electric steel forging furnace, built by C. I. Hayes, Inc., gets its power supply through Wagner Dry-Type transformers.

Wagner Dry-Type Transformers supply power for the world's largest electric steel forging furnace

In North Grafton, Massachusetts, the Wyman-Gordon Company has placed in service the largest electric steel heating forging furnace ever built anywhere. It has a capacity of 10 tons of steel billets.

The plant, largest single unit in the USAF heavy press program, makes plane components of unprecedented strength, lightness and dimension on 50,000-ton, 35,000-ton and other hydraulic closed die forging presses.

Operating temperatures as high as 2400 degrees Fahrenheit may be maintained with a connected load of 600 kilowatts, supplied to the furnace through eight Wagner Dry-Type transformers.

Wagner Dry-Type transformers were selected for this job because they supply dependable power right at the load. You can spot them *close* to your loads and save money in terms of shorter runs of copper, reduced line losses, and lower installation expenses.



Wagner dry-type transformers for power distribution are available in single-phase, 1 through 500 kva; and three-phase, 3 through 2000 kva ratings. Write for Bulletin TU-57 or consult the nearest of our 32 branch offices.



...to help America LIVE BETTER—Electrically



Wagner Electric Corporation

6460 Plymouth Ave., St. Louis 14, Mo., U.S.A.

BRANCHES AND DISTRIBUTORS IN ALL PRINCIPAL CITIES

TWIN SAVINGS for YOU!

SBS-30 and SBS-60
solve ALL skin cleaning
problems...are almost

IMPOSSIBLE TO WASTE!



SBS-30 Waterless
Washstation
Used Without Water

SBS-60
Wash-
station
Used
With
Water

SBS-60 CREAM DEODORANT SOAP

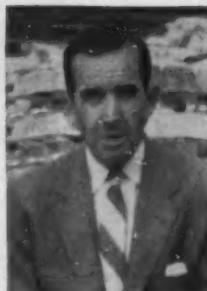
PLANT-WIDE SATISFACTION AND SAVINGS ASSURED

Solve your skin cleaning problems for good by simply specifying SBS-30 Waterless Skin Cleanser and SBS-60 Cream Deodorant Soap. Both of these dramatic new cleansers adhere to the hands... cannot run off like liquid, powdered or wasteful bar soaps. SBS-30 Waterless Skin Cleanser is recommended for the removal of almost "impossible" soils such as tar, paint, glue... SBS-60 Cream Deodorant Soap efficiently removes all ordinary soils found in factories, shops and offices. Dispensed from "throw-away" containers, you get savings of 30%... 40%... up to 50% with SBS-30 and SBS-60—it will pay your organization to get the facts today!

FREE FACTS FOLDER explaining specific uses, by industry and plant area. Simply write:



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Chemical By-Products Division
302 Weller St., Saginaw, Mich.
Canadian Subsidiary
Chemical By-Products, Ltd.
8 Ripley Ave., Toronto 3, Canada



Edward R. Murrow, director
of Columbia Broadcasting,
was top paid officer at \$316,-
076.



William Balderston, Philco
chairman, waived rights to in-
centive bonus, took 50% cut
to \$60,000.

	Salary	Bonus	1955 Total	1954 Total
SOCONY MOBIL OIL CO.				
B. B. Jennings, chm.....	\$169,120*	....	\$169,120	\$169,120
J. C. Case, v.p.....	97,370*	....	97,370	97,370
Albert Nickerson, pres.....	104,560*	....	104,560	....
*Includes group insurance and pension payments.				
STANDARD OIL CO. OF CALIF.				
R. G. Fallis, chm.....	\$185,000	\$17,074*	\$202,074	\$160,000
T. S. Petersen, pres.....	160,000	14,734*	174,734	150,000
Gage Lund, v.p.....	105,833	9,695*	115,528	109,000
*Contingently allocated under Stock Plan.				
STANDARD OIL CO. (IND.)				
Robert E. Wilson, chm.....	\$174,246*	....	\$174,246	\$171,368
Frank O. Prior, pres.....	156,369*	....	156,369	145,709
Alonzo W. Peake, pres.*	59,276	....	59,276	161,038
Dwight F. Benton, v.p.....	94,372*	....	94,372	....
*Plus \$2,427, \$2,202, and \$1,372, respectively, in employee savings plan.				
STANDARD OIL CO. (N.J.)				
Eugene Holman, chm.....	\$212,500	\$21,857*	\$234,357	\$213,225
M. J. Ruthbone, pres.....	164,583	16,901*	181,484**	163,357
J. E. Crane, v.p.....	145,833	15,113*	160,946**	....
*Thrift plan; **Plus \$24,435 and \$32,371, respectively, in annuity payments.				
THE TEXAS CO.				
J. S. Leach, chm.....	\$165,000	....	\$165,000*	\$165,000
Augustus C. Long, pres.....	150,000	....	150,000*	150,000
R. F. Baker, ex. v.p.....	100,000	....	100,000*	100,000
*Plus \$26,965, \$13,948, and \$19,550 respectively under group insurance-pension plan.				
TIDE WATER ASSOCIATED OIL CO.				
D. T. Staples, pres.....	\$80,755*	....	\$80,755	\$81,125
L. F. Bayer, v.p.....	63,859*	....	63,859	60,048
Fero Williams, v.p. & treas.....	50,628*	....	50,628	....
*Includes premiums under Management Group Life Insurance Plan and \$1,878, \$1,481, and \$1,132, respectively, under employee thrift plan.				
UNION OIL CO. OF CALIF.				
Reese H. Taylor, pres.....	\$125,000	\$4,232*	\$129,232	\$125,000
W. L. Stewart Jr., senior v.p.....	60,000	2,127*	62,127	90,000
A. C. Rubel, v.p.....	65,000	2,035*	67,035	75,000
*Employees incentive plan.				

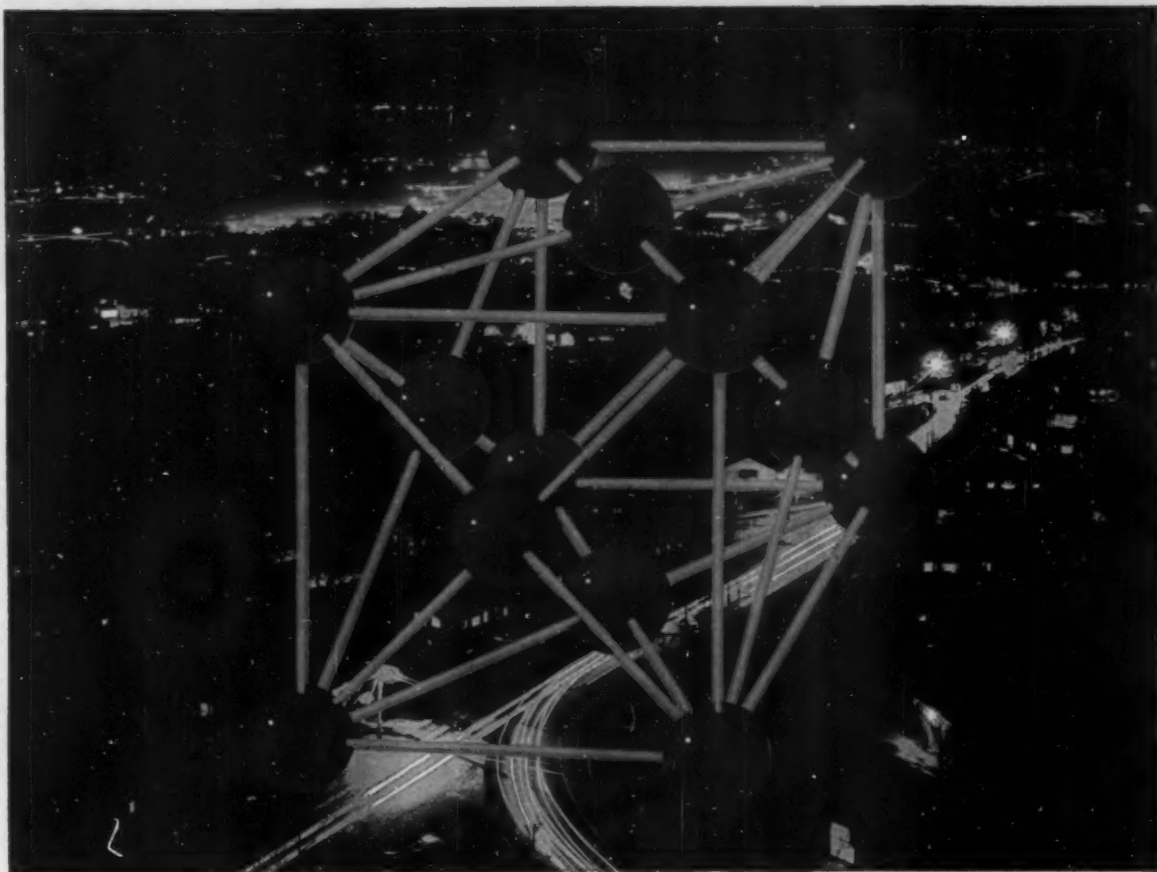
PAPER PRODUCTS

CROWN ZELLERBACH CORP. (May 1 to Dec. 31, 1955—changed to calendar year.)				
J. D. Zellerbach, pres.....	\$84,833	....	\$84,833	\$102,300
H. L. Zellerbach, ex. v.p.....	61,500	....	61,500	76,650
D. S. Denman, v.p.....	47,916	....	47,916	56,300
INTERNATIONAL PAPER CO.				
John H. Hinman, chm.....	\$161,111	....	\$161,111	\$150,000
Harrison R. Weaver, 1st v.p.....	117,835*	....	117,835	125,000
Richard C. Doane, pres.....	125,000	....	125,000	109,472
*Includes \$114,583 for 10 months ending Oct. 31, 1955, when he retired, and \$3,252 pension.				
ST. REGIS PAPER CO.				
Roy K. Ferguson, pres.....	\$100,800	....	\$100,800	\$100,800
Edward R. Gay, ex. v.p.....	66,461	....	66,461	60,280

RADIO & TELEVISION

COLUMBIA BROADCASTING SYSTEM, INC.				
Edward R. Murrow, dir.....	\$316,076*	....	\$316,076	\$306,611
Frank Stanton, pres.....	293,857**	....	293,857	263,171
Wm. S. Paley, chm.....	241,526**	....	241,526	216,526
*Excludes royalties on "Person to Person"; **includes \$12,335 and \$16,526 in pension payments, respectively.				
PHILCO CORP.				
William Balderston, chm.....	\$60,000*	....	\$60,000	\$117,750
James H. Carmine**	75,000*	....	75,000	106,250
John M. Otter, ex. v.p.....	50,000	27,900	77,900	73,167
*Waived participation in incentive pay plan to increase distribution to other executives; **announced retirement in April.				

(Continued on page 122)



Model illustrating crystalline structure of copper, against a background view of Oak Ridge.

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...essential to the Atomic Age !

When the Atomic Age dawned . . . copper was at hand to implement it.

It was *copper* that facilitated the building of nuclear accelerators or "atom smashers". . . the backbone of basic atomic research. The magnet of a modern cyclotron and its control circuits require some 300 tons of copper. And in the maze of analytical instrumentation, copper is indispensable.

The whole history of America is one of progress through inventions . . . and most inventions have

in some way been dependent on copper.

The steamboat, with its copper boilers, ushered in a new Age of Water Transportation. Telegraph and telephone lines needed copper to make possible a new Age of Communications. Marconi's "wireless", with its coils and cables of copper, started the Age of Electronics.

As your Company moves ahead into the Atomic Age, move ahead with *copper* . . . in every age, the metal of progress!

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... AN INDUSTRY SOURCE OF TECHNOLOGICAL AID, INCLUDING A LIBRARY OF TECHNICAL LITERATURE AND A COUNCIL OF SPECIALISTS

COPPER OR ITS ALLOYS PROVIDE THESE ADVANTAGES:

Best conductor of electricity commercially available



Does not rust . . . high corrosion resistance



Best heat transfer agent of all commercial metals



Easy to machine, form, draw, stamp, polish, plate, etc.



Welds readily . . . excellent for soldering and brazing





Bill sure has a lot
of bounce...

■ Because his . . . MITCHELL room air conditioner brings him refreshing sleep all night . . . Mrs. Bill cool comfort all day . . . and their children relief from hay fever all summer, spring and fall.

MITCHELL

the world's finest air conditioner

■ Yes, there's no better measure of summer comfort than the cool, clean, refreshing air that a MITCHELL room air conditioner will bring your family . . . now and for years to come!

MITCHELL

the world's finest air conditioner

■ Did you know that the MITCHELL is sound conditioned for quietest operation . . . fits flat with the wall (no bulge) . . . and is rated first in cooling power by strict tests in our modern laboratories?

■ Why not start enjoying summer instead of enduring it...

see your **MITCHELL** dealer today for the air conditioner that will put new bounce in your summer living. You'll be glad you did.

MITCHELL MANUFACTURING CO.

A DIVISION OF CORY CORPORATION

Also complete home and commercial air conditioning systems, air or water cooled.

2525 Clybourn Avenue, Chicago 14, Illinois

In Canada: 19 Watman Ave., Toronto
In Mexico: Mitchell-American, 38 Orizaba, Gral. Anaya Mex. D. F.



James T. Leftwich, F. W. Woolworth president, earned \$20,000 more in 1955, went into \$200,000 range.



Clifford F. Hood, U. S. Steel president, was top paid officer of company at \$242,367.

RADIO CORP. OF AMERICA

	Salary	Bonus	1955 Total	1954 Total
**David Sarnoff, chm.	\$200,000	.....	\$200,000	\$200,000
Frank Folsom, pres.	165,000	32,991*	197,991	186,434
E. W. Engstrom, ex. v.p.	85,000	11,982*	96,982	.....

*Payable in five annual installments as incentive bonus, if earned out; amount listed paid in 1955.
**Resigned Dec. 7, 1955.

RETAIL CHAINS

	Salary	Bonus	1955 Total	1954 Total
W. T. GRANT CO.				
Edward Staley, pres.	\$144,747	.....	\$144,747	\$130,782
Louis C. Lustenberger, ex. v.p.	109,876	.....	109,876	97,132
J. Luther Knies, v.p.	87,478	.....	87,478	77,030
S. S. KRESGE CO.				
F. P. Williams, pres.	\$92,681	.....	\$92,681	\$75,000
R. D. Kresge, v.p.	61,340	.....	61,340	50,000
H. J. Liverance, v.p.	61,340	.....	61,340	50,000
J. C. PENNEY CO.				
J. C. Penney, chm.	.....	.....	.....	.....
A. W. Hughes, pres.	\$106,460*	.....	\$106,460	\$101,495
**George E. Mack, ex. v.p.	53,973*	.....	53,973	101,495
R. C. Weideman, compt.	106,460*	.....	106,460	.....
F. W. WOOLWORTH CO.				
James T. Leftwich, pres.	\$212,015	.....	\$212,015	\$186,684
Alfred L. Cornwall, chm.	100,000	.....	100,000	100,000
Robert C. Kirkwood, ex. v.p.	79,499	.....	79,499	.....

*\$10,000 is salary, rest under General Office Compensation plan; **for services from Jan. 1 to July 1.

STEEL COMPANIES

	Salary	Bonus	1955 Total	1954 Total
ARMCO STEEL CORP.				
W. W. Seibald, pres.	\$265,049	.....	\$265,049	\$245,048
Charles R. Hook, chm.	240,053	.....	240,053	220,052
Ralph L. Gray, ex. v.p.	196,283	.....	196,283	175,032
BETHLEHEM STEEL CORP.				
Eugene G. Grace, chm.	\$150,000	\$555,923	\$705,923	\$590,815
Arthur B. Homer, pres.	120,000	463,270	583,270	487,347
Robert E. McMath, v.p.	75,000	370,615	445,615	368,876
COLORADO FUEL & IRON CORP. (Year ended June 30)				
A. F. Franz, pres.	\$116,200	.....	\$116,200	\$116,175
Franklin Berwin, v.p.	45,550	.....	45,550	45,550
A. C. Bakker, v.p.	56,050	.....	56,050	.....
KÄISER STEEL CORP. (year ended June 30)				
J. L. Ashby, v.p. & gen. mng.	\$85,362	.....	\$85,362*	\$69,270
George B. McMeans, v.p.	49,620	.....	49,620*	43,883
C. F. Borden, v.p.	43,350	.....	43,350*	37,550
*Plus \$3,824, \$2,513, and \$2,646, respectively, in pension payments.				
JONES & LAUGHLIN STEEL CORP.				
C. L. Austin, pres.	\$105,000	\$58,351	\$163,351	\$130,780
Ben Morell, chm.	150,000	80,110	230,110	186,572
J. E. Timberlake, v.p.	66,667	37,331	103,998	.....
NATIONAL STEEL CORP.				
Ernest T. Weir, chm.	\$273,106	.....	\$273,106	\$260,606
Thomas E. Millsop, pres.	273,106	.....	273,106	260,616
Wilmer A. Murphy, v.p.	90,000	.....	90,000	.....
REPUBLIC STEEL CORP.				
T. M. Girdler, chm.	\$250,000	.....	\$250,000	\$300,000
C. M. White, pres.	310,000	.....	310,000	300,000
T. F. Patton, 1st. v.p.	170,500	.....	170,500	160,000
U. S. STEEL CORP.				
Benjamin F. Fairless, chm.*	\$170,367	.....	\$170,367	\$259,200
Clifford F. Hood, pres.	242,367	.....	242,367	213,000
Roger M. Blough, chm.	222,133	.....	222,133	.....
*Resigned May 3, 1955.				
YOUNGSTOWN SHEET & TUBE CO.				
J. L. Mauths, pres.	\$160,680	\$65,032	\$225,712*	\$186,537
Walter E. Watson, 1st. v.p.	107,120	43,355	150,475*	124,358
A. S. Glossbrenner, v.p.	91,852	36,852	128,704	.....

*Plus \$10,367 and \$9,214, respectively, received on reaching normal retirement age.

(Continued on page 124)



chemicals
at work



Beautiful metal goods need a foundation treatment, too!

Metal parts that have just been through a series of fabrication processes are not exactly attractive to the eye. They're usually pretty well covered with oils, greases, waxes, buffing compounds, fluxes, metal chips and shavings, and plain old shop dirt. Before they're ready for market—or for such finishing treatments as painting, enameling or plating—that accumulation of grime must be removed to reveal the clean lustrous metal surface. And in today's

rapid production pace, it has to be done quickly and economically.

The answer is vapor degreasing—a quick simple process which employs the solvent action of trichlorethylene to dissolve the soluble soils and to completely flush away the insolubles.

Columbia-Southern's new "Trichlor" plant at Barberton, Ohio, will produce a high quality trichlorethylene especially for solvent degreasing.

Trichlorethylene is one of numer-

ous specialty products of Columbia-Southern Chemical Corporation—also a leading producer of chlorine, alkalies and other basic chemicals.

COLUMBIA-SOUTHERN CHEMICAL CORPORATION

SUBSIDIARY OF PITTSBURGH PLATE GLASS COMPANY
ONE GATEWAY CENTER • PITTSBURGH 22 • PENNSYLVANIA

**CHLORINE, ALKALIES AND RELATED CHEMICALS
OFFICES IN PRINCIPAL CITIES**

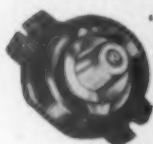
IN CANADA: Standard Chemical Limited and its
Commercial Chemicals Division



Strongly Recommends KLIXON Protectors for all Motors

REDWOOD CITY, CALIF.: Joseph Ross LoSavio, Manager of the motor department of Coast Electric Company, insures against motor failures with Klixon Protectors. He says —

"Managing the Motor Department of a leading Electrical Firm, such as the Coast Electric Company who has a twenty-five-year reputation for quality merchandise, workmanship, and fair prices, every effort must be made to insure against motor failures by burn-outs. We accomplish this by installing Klixon Protectors on all our repaired motors — reducing the motor warranty failures by burn-outs by 90%." "Therefore, we strongly recommend the Klixon Protectors on all motors."



Manual Reset

NEW FREE BOOKLET "The Story of the Spencer Disc"

A truly interesting, informative booklet which gives the history of the Spencer Disc. It tells how the disc was discovered, how it operates, how it was first used and how it is now used in various Klixon Products. Write for your Free copy, today.

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Construction of the St. Lawrence Seaway is speeding full steam ahead. Watch the fascinating work involved on this mighty project from specially-built lookouts near Cornwall.



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fully illustrated literature

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Canada's Family
Variety Vacationland

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Room 455, Parliament Bldgs., Toronto 2, Ont.

NAME.....

STREET.....

CITY.....STATE.....

PLEASE PRINT

TEXTILES

	Salary	Bonus	1955 Total	1954 Total
BURLINGTON INDUSTRIES, INC. (Year ended Oct. 1)				
J. Spencer Love, chm.....	\$140,000	\$7,605*	\$147,605	\$129,839
J. C. Cowan Jr., v. chm.....	75,000	5,704*	80,704	77,130
Walter E. Greer Jr., v.p.....	75,000	4,563*	79,563	86,704
Herbert Kaiser, v.p.....	112,000	5,476*	117,476	99,044
*Paid to trustee under profit-sharing plan.				
J. P. STEVENS & CO., INC.				
J. P. Stevens Jr., chm.....	\$80,000	....	\$80,000	\$20,000
Joseph Sutherland, pres.....	80,000	....	80,000	80,000
Wilbert J. Carter, ex. v.p.....	80,000	....	80,000	80,000
Raymond G. Emery, ex. v.p.....	80,000	....	80,000	80,000
UNITED MERCHANTS & MFRS., INC. (Year ending June 30)				
J. W. Schwab, pres.....	\$100,300	\$286,288	\$386,588	\$356,366
A. Harry Feldman, v.p.....	40,300	135,904	176,204	163,178

TIRE & RUBBER COMPANIES

FIRESTONE TIRE & RUBBER CO.				
Harvey S. Firestone Jr., chm.....	\$155,000	....	\$155,000	\$155,000
Lee Jackson, pres.....	130,000	....	130,000	130,000
John Shea, v.p.....	102,000	....	102,000	102,000
James E. Trainer, ex. v.p.....	103,000	....	103,000	....
GOODYEAR TIRE & RUBBER CO.				
E. J. Thomas, pres.....	\$188,697	....	\$188,697	\$190,082
R. W. Litchfield, chm.....	141,093	....	141,093	141,093
R. S. Wilson, v.p.....	130,340	....	130,340	131,255
P. E. H. Larey, v.p.....	131,469	....	131,469	....
*Plus \$2,174 paid under retirement annuity plan.				
B. F. GOODRICH CO.				
John Collyer, chm.....	\$235,000	....	\$235,000	\$235,000
W. S. Richardson, pres.....	165,000	....	165,000	161,667
J. W. Keener, v.p.....	110,000	....	110,000	110,000

TOILET PREPARATIONS

COLGATE-PALMOLIVE CO.				
Edward H. Little, chm.....	\$150,000	\$200,285**	\$350,285	\$330,377
*Wm. L. Sims II, pres.....	111,343	100,285**	211,628	180,000
Hugh R. MacMillan Jr., v.p.....	56,792	50,000**	106,792	....
*Ceased to be president July 1; compensation includes \$30,000 severance; **payable in five equal installments if earned out.				
PROCTER & GAMBLE CO. (Year ended June 30)				
Richard R. Deupree, chm.....	\$100,000	....	\$100,000	\$200,000
Neil H. McElroy, pres.....	285,000	\$35,317*	\$320,317	257,898
Howard J. Morgans, ex. v.p.....	184,545	29,324*	\$213,869	150,000
*Profit-sharing trust plan.				

TRANSPORTATION & EQUIPMENT

GENERAL AMERICAN TRANSPORTATION CORP.				
Sam Laud, vice-chm.....	\$120,000	....	\$120,000	\$125,000
L. N. Selig, chm.....	125,000	....	125,000	125,000
W. J. Stebler, pres.....	100,000	....	100,000	92,033
NEW YORK CENTRAL RR.				
Alfred E. Perlman, pres.....	\$102,400	....	\$102,400	\$125,940*
Karl A. Borntrager, v.p.....	60,000	....	60,000	....
Thomas J. Deegan Jr., v.p.....	55,000	....	55,000	....
*Paid to Wm. White as president.				
PENNSYLVANIA RAILROAD				
James M. Symes, pres.....	\$127,530	....	\$127,530	\$112,217
James P. Newell, v.p.....	71,600	....	71,600	71,210
PULLMAN, INC.				
Champ Carry, pres.....	\$130,800	....	\$130,800	\$120,183
Warren L. Smith, v.p.....	95,100	....	95,100	95,600
SOUTHERN PACIFIC RR.				
Donald J. Russell, pres.....	\$125,000	....	\$125,000	\$125,000
George L. Buland, v.p.....	64,666	....	64,666	63,600
J. W. Corbett, v.p.....	62,500	....	62,500	....

UTILITIES

COMMONWEALTH EDISON CO. (CHICAGO)				
Willis Gale, chm.....	\$110,000	....	\$110,000	\$100,000
Charles Y. Freeman, chm. ex. com...	60,692	....	60,692	90,833
John Evers, pres.....	60,000	....	60,000	60,000
CONSOLIDATED EDISON CO., N. Y.				
Hudson R. Searing, chm.....	\$105,240	....	\$105,240	\$106,000
Harland C. Forbes, pres.....	94,820	....	94,820	95,460

END



Spring steel within this range ...
FOR THE MOST EXACTING NEEDS KNOWN TODAY!

• That this is the age of specialization is certainly true in the use of steels. And in this regard *Athenia Steel* customers benefit especially by two not-too-common factors. First, by extreme control of quality and uniformity, unsurpassed, seldom equalled *anywhere!* Secondly, by painstaking technical service to determine or develop precisely the right steel for any special need.

Here at Athenia we concentrate on cold rolled high

carbon flat steels, custom made of .45 carbon and higher, in widths from .015" to 16" and thicknesses from .001" to .065". Full range of finishes and tempers. We also produce special narrow width stainless, and the new super-tough, corrosion resistant spring material, Nilcor*.

For a new and profitable experience in service and in steel controlled precisely to *your* needs ... try us!

*Trade Mark National-Standard Company

NATIONAL-STANDARD COMPANY • NILES, MICHIGAN
 Tire Wire, Stainless, Fabricated Braids and Tape

ATHENIA STEEL DIVISION • CLIFTON, N. J.
 Flat, High Carbon, Cold Rolled Spring Steel

REYNOLDS WIRE DIVISION • DIXON, ILLINOIS
 Industrial Wire Cloth



WAGNER LITHO MACHINERY • JERSEY CITY, N. J.
 Special Machinery for Metal Decorating

WORCESTER WIRE WORKS DIVISION • WORCESTER, MASS.
 Round and Shaped Steel Wire, Small Sizes

In Management

• • •

Business Calls In Social Sciences

To Analyze Its Behavioral Pattern

Management is going to have to turn to the social sciences to find out what makes business tick and what forms it can evolve. That's the verdict of Dr. Mason Haire, associate professor of psychology at the University of California at Berkeley.

At an American Management Assn. General Management Conference in New York last week, Haire said: "To flesh out present skeleton theories on management organization with information on what really goes on is going to call for behavioral research on how people and business groups interact. This in turn is going to involve delving into a host of data on changes in size, shape, and function in businesses, and getting information on why such decisions are made."

So far, Haire says, social science hasn't contributed so much as desired, partly because it hasn't been getting the right answers to its questions, and partly because it hasn't been asking the right questions.

Extensive business research is needed, Haire claims, to bring out underlying principles. Many businessmen will resist this intrusion, just as they resisted the economists 40 years ago. "Today, however," he points out, "we rely on cost-of-living data, turnover data, car loadings, retail sales, and the like as guides for general business decisions." The same, he thinks, eventually will hold true for behavioral data.

• • •

Emerson Electric Figures Prove

Company Revamping Paid Off

Latest Emerson Electric Mfg. Co. figures add evidence that a top-to-bottom revamping of the company (BW—Jan. 21 '56, p104) is paying off.

Sales for the six months ended Mar. 31 were \$27-million, against \$17.3-million for the same period a year ago. Earnings were \$1.2-million compared with \$584,627 in the like 1955 period. A two-month strike affected last year's results. But Wallace R. Persons, president, said the new six-months' sales figure was a record.

• • •

Hertz Will Spend \$40-Million

To Swell Its Rental Fleet

Hertz Corp. will swell its fleet of 16,500 passenger cars and 16,000 trucks available for rent or lease by roughly a third over the next year. Walter L. Jacobs, president, says the company plans to spend \$40-million for 10,000 new autos and 4,000 new trucks—half as

replacements, half as additions. The company also arranged purchase of another 2,100 cars and 2,000 trucks from R. S. Robie, one-time Hertz licensee in New England (BW—May 19 '56, p36).

Hertz says it is banking on two trends to keep it growing. First and foremost, says Jacobs, is the spectacular growth in the use of vehicles for business, pleasure, and convenience. Combined with increased air and train travel, "vehicle addiction" spells plenty of use for Hertz's services. Second is the growing popularity among companies to cut maintenance time and costs by leasing truck and car fleets.

• • •

Atlantic Coast Line RR to Move

Headquarters to Jacksonville

After five months of study the Atlantic Coast Line RR has decided to shift its general headquarters from Wilmington, N.C., to Jacksonville, Fla., "as soon as a building can be erected."

The move, affecting some 1,350 employees—including families, about 6,000 people—involves a \$6-million annual payroll and has been in the making since last Dec. 15. At that time the railroad's board of directors, increasingly unhappy about ACL's Wilmington headquarters, which were off the mainline, directed company president Champion McD. Davis to select a site for the general offices nearer the center of the company's lines "as soon as practicable."

Study groups appointed by Davis have been scurrying up and down the railroad since then, narrowed the choice down about Mar. 1 to three cities—Charleston, S.C., Savannah, Ga., and Jacksonville. Jacksonville centrally located on the mainline, fits the bill most closely, says a company spokesman.

The railroad's chief engineer was in Jacksonville last week, conferring with architects on plans for a 300,000 sq. ft. building which will be erected on a 4½ acre plot long owned by ACL on the St. John River, in the downtown area. Target date for completion, and the first influx of personnel, is the end of 1957.

In the meantime, the city is going ahead with plans to purchase 6½ acres of eyesore warehouse property immediately adjacent to the ACL site, which it will level and use for a new municipal development—possibly a city auditorium.

• • •

Management Briefs

An electronics plant at St. Petersburg will inaugurate General Electric's manufacturing operation in Florida. The plant, which will start going up in a few days and will employ more than 600, will make electronic equipment for Sandia Corp., a contractor to AEC.

A reshuffle at Anaconda Co. puts 65-year-old ex-miner Clyde E. Weed in the top spot. Weed succeeds retiring Pres. Robert E. Dwyer. Other changes: Thomas A. Campbell, 59, becomes a vice-president; and W. Kenneth Daly, 65, a vice-president and controller. Anaconda's 1955 sales were \$630.7-million.



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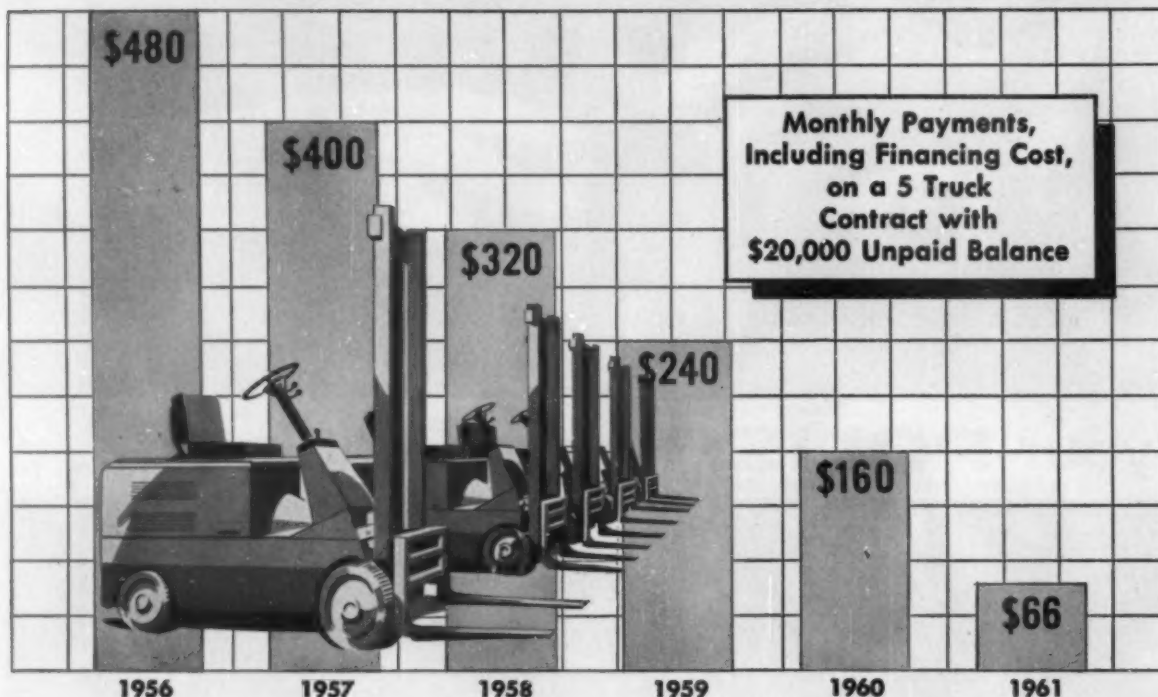
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More Power for the Latins

American & Foreign Power plans
atom plants in major expansion

OUT ON BRAZIL's frontier, old-time ranchers remember Peixotos Gorge as a smugglers' hideout. It's still an out-of-the-way spot, but the scenery is changing these days. Straddling the roaring Rio Grande is a power project—the Paul Bunyan handiwork of American & Foreign Power Co., Inc., one of the largest U.S. investors in Latin America (map, right).

Brazilians talk excitedly about Peixotos. But they're even more worked up over the prospect of getting a Foreign Power atomic plant.

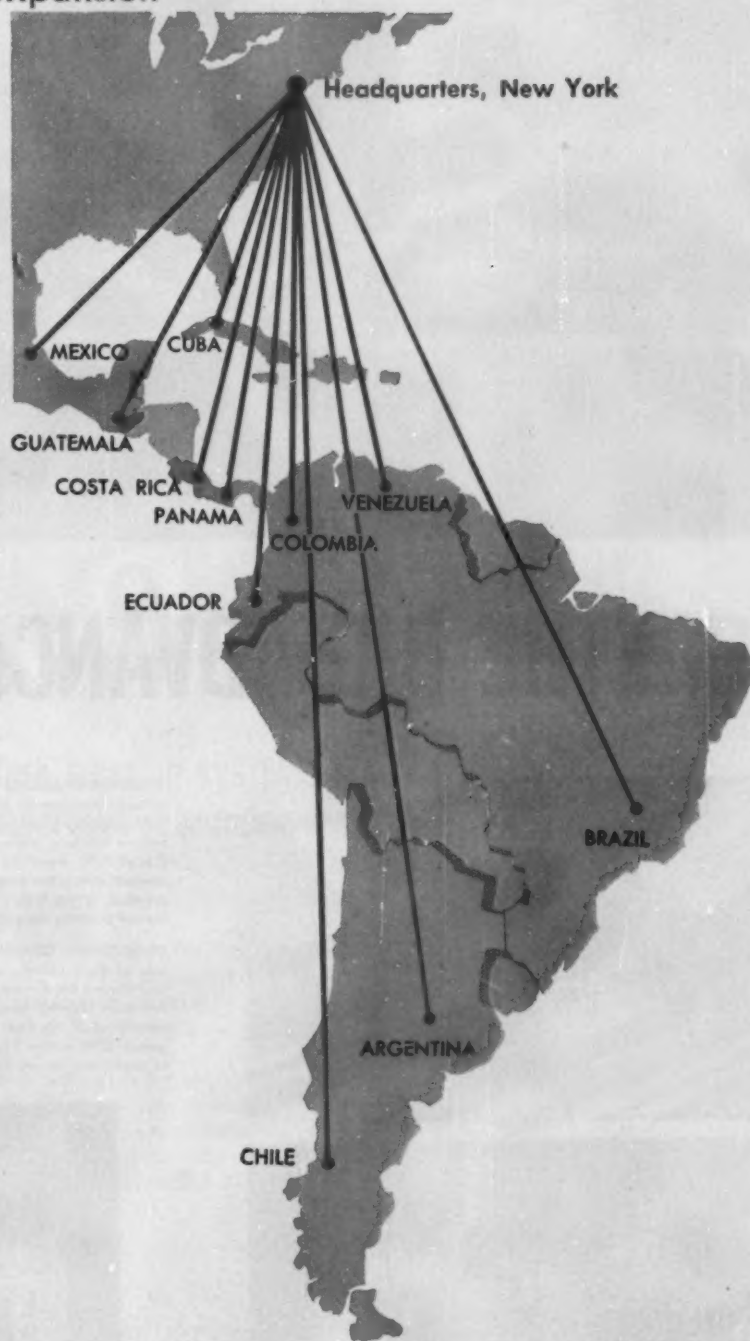
• **Sudden Growth**—Altogether, Foreign Power has earmarked about \$18-million for three atomic plants. Brazil, Cuba, and Mexico—according to reliable reports—will be the countries to get them. Just last week A&FP placed orders for two of the three commercial reactors—a 10,600-kw. unit from International General Electric Co., a 10,400-kw. one from Atomics International, division of North American Aviation, Inc.

That's not all Foreign Power has in store for Latin America. In the next five years, it expects to spend a record \$500-million to boost its system's capacity—the most ambitious construction program in its history. And it means even more when compared with the way Foreign Power has coasted along, periodically, in the past.

Latin America's chronic power shortage, of course, is the main pressure behind Foreign Power's buildup. But getting the capital to pay for it is what really counts.

That's where A&FP has cause for cautious optimism. The company won't have an easy time financing its planned growth. But the improved economic climate in Latin America should help (BW—May 26 '56, p153). As indicators, there are Guatemala's recovery after a revolution, Peron's downfall, Chile's economic reforms.

• **Many Baskets**—Even so, there are pitfalls that could upset A&FP's plans. For one thing, nationalism is a fact of life in Latin America. Privately owned utilities are its readiest, and biggest target. Then, there is the vicious circle of inflation—higher maintenance and material costs, followed by delays in rate increases, topped by foreign-ex-





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YORK CONTINUOUS PACKAGE FREEZER (left) automatically loads and unloads rectangular packages in volume. A single operator controls the entire freezing process. Automatic loader pushes each row of packages onto a freezing plate, where product begins freezing instantly on contact (upper left). Both top and bottom surfaces of packages are in intimate contact with plate and freezing is uninterrupted by loading of additional product. When filled, machine ejects row of frozen product for each new row of product loaded (lower left).



YORK-UNION CONTINUOUS FOOD FREEZER (below) handles varied products at high speeds, automatically. Amazingly versatile, this York-Union Continuous Food Freezer can freeze thousands of food packages an hour. A typical unit 60' long, 14' wide and 11' high could freeze each of these quantities in an hour: 3720 half gallons of ice cream; 3560 loaves of bread; 2390 whole 2 1/4 pound chickens. A uniform temperature of -30° F. or lower can be maintained.





CONTINUOUS FREEZING BY YORK

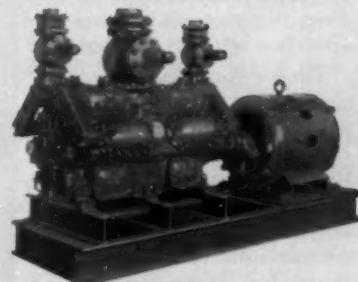
Two new versatile York freezing systems are completely automatic, make possible important economies in frozen food handling.

Automatic, high speed *continuous* food freezers are now a reality, thanks to York leadership in refrigerating equipment.

This is exciting news, not only for food processors, but for the housewife who buys food for her family. It can mean frozen foods in greater variety, at greater savings. Formerly, fresh foods had to be stacked on trucks by hand, pushed by hand into the freezer, and unloaded by hand. But York's new automated procedures will speed and simplify handling.

York designed one of these new freezers especially for large, bulky foods or odd-shaped packages. The other is for small, rectangular packages of uniform size, and can adapt itself to packages of different sizes as required by various runs.

For more information on these new freezers call your nearest York district office. The telephone number is listed in your Classified Directory under "Refrigeration Equipment".



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change shortages. All of this affects Foreign Power's chances of attracting new capital to pay for needed expansion.

What seems to give AFP resilience in the face of never-ending problems, is its built-in diversity. Just by the law of averages, not more than a couple of its many subsidiaries give the New York management a hard time at once.

I. Growing, Changing

Geographical diversity is, more or less, a byproduct of Foreign Power's early growth. At the turn of the century, Europe was the main banker for Latin American utilities. A&FP's parent, Electric Bond & Share Co. (Ebasco), figured the time was ripe for organizing small, isolated power plants into an integrated system. Latin American utilities would also be good customers for U.S. machinery and equipment.

• **Moving In**—Ebasco laid the cornerstone for expansion in 1917 when it acquired German-owned properties in Panama. By 1923 Ebasco was so busy south of the border that it set up a separate organization—American & Foreign Power—to run its Latin American holdings.

In Mexico, Chile, Brazil, and Argentina, A&FP moved in on British and Canadian interests; in other countries, it pulled government-owned properties into its fold. By the early 1930s, Foreign Power was a \$500-million business, entrenched in 11 Latin American countries, with additional properties an ocean away in India and China. For this expansion, Ebasco put up about 52% of the capital. (Ebasco now owns 56% of the stock in A&FP).

• **Lean Years**—After the fattening came the lean years. The depression all but eliminated foreign-exchange reserves. It turned national currency values topsy-turvy. It totally or partially blocked remittances of dividends and interest. Atop this came a wave of antagonism toward foreign-owned utilities similar to the New Deal legislation that slapped down U.S. utilities. Mexico, for example, set up a Federal Electricity Commission in 1937 to control—and compete with—utilities.

But Foreign Power's broad base kept the boat from rocking too much. Ironically, it was the Shanghai Power Co., a profitable subsidiary until its expropriation in 1941, that helped balance off A&FP's bad days in Latin America. And even during the bottom of the depression—from 1930 to 1935—A&FP's electric output rose some 25%.

• **Transformed**—The framework of Foreign Power's system today is essentially what it was 20 years ago. But it is a far different animal:

• It has sloughed off as many as possible of its unprofitable properties—streetcar companies, for instance. About

"... more than once in the past, Foreign Power has had to make the best of some very bad situations . . ."

A&FP starts on p. 129

95% of its holdings today generate or transmit electricity.

- It has consolidated its original 120 or so subsidiaries. Now there are only 48. For example, six newly formed companies are taking over the management of 16 subsidiaries in Mexico.

- It has simplified its capital structure, in line with reorganization under the Public Utility Holding Company Act of 1935. Since 1952 it has been paying dividends on its common—for the first time in its history.

- It has set up a wholly owned subsidiary, Ebasco International Corp., to direct its Latin American operations.

Meanwhile, Foreign Power's size has reached new proportions. In Brazil, it's outweighed by Brazilian Traction, Light & Power Co.; similarly in Mexico, by Mexican Light & Power Co., Ltd.—both held primarily by Canadian and Belgian interests. But, over-all, Foreign Power is still the largest private utility in Latin America.

Its assets of \$744-million in 1945 now amount to \$1.04-billion. Its customers (both residential and industrial) have increased from 1.64-million in 1945 to 2.64-million.

Despite this steady expansion, more than once in the past it has had to make the best of some very bad situations. And that holds true even today.

"You've got to be optimistic to operate in Latin America," one Foreign Power executive comments.

- **Market**—Demand for power is soaring almost everywhere in Latin America. It comes from the year-by-year speedup in industrialization and in migration of workers from farms to cities.

With demand in cities outpacing electric output, you find businesses in many Latin American cities working irregular hours, governments from time to time rationing power. Experts predict that Latin America will have to double its power output in the next decade.

This challenge is hard to meet. Most Latin American countries have a huge hydro potential, but the hydro sources are often in out-of-the-way locations. Practically all lack coal.

- **Biggest Snag**—But the biggest handicap is how to get the capital for expansion. Foreign Power must look for (1) adequate rates to generate income to plow back into property and (2) adequate foreign exchange to keep overseas investors happy.

On the matter of rates, take Brazil. Back in 1934, the government passed an ultra-nationalistic Code of Waters. Under this code, the government based

utility rates not on the values of inflated currencies, but on the "historic cost" of utility properties. Because of this—and the public's anti-utility attitude—Foreign Power could not get capital.

In the case of foreign exchange, Foreign Power's ability to repatriate profits hinges, to a large extent, on the ups and downs of coffee, sugar, and other commodity exports that earn dollars. And Foreign Power has for years been watching devalued pesos and cruzeiros, earned by its subsidiaries, buy fewer and fewer dollars.

- **Politics**—Besides money troubles, there's always the threat of politics. Mention Argentina to a top executive, and he says: "It's quite horrible." In 1943, Peron's government began expropriating Foreign Power's Ansec Group on a piecemeal basis.

By early 1950, some 27 properties, from streetcars to power lines—over half of Ansec's \$117-million assessment—were in government hands. Since then, the government has gone to the point of erecting power lines paralleling Ansec's. In the past eight years, Ansec has remitted only about \$100,000 to its parent.

II Brighter Outlook

Today, the prospect is brighter. A&FP's president, Henry B. Sargent, no longer writes off Argentina as a permanent fiasco. Mexico granted rate increases last year. Though one A&FP executive says, "Chileans just aren't built for austerity," he thinks that government's recent reforms may brake the country's long-term inflation. Brazil's National Economy Council is now amending the Code of Waters to raise utility earnings. And Foreign Power reportedly is getting a 20% return on its Venezuelan subsidiary's investments.

- **Plowing Back**—In fact, Foreign Power plowed back enough earnings to finance about two-thirds of its \$380-million postwar construction. For its new program, however, it plans to depend more on borrowings.

"Long-term debt is what we want—like U.S. utilities," says one executive. Besides local borrowings in Latin America, Foreign Power would like to attract more U.S. insurance and bank money. As one bright sign, Manufacturers Trust Co. of New York in February purchased a \$4-million participation in the \$12-million Export-Import Bank credit to A&FP's Cuban company.

The company has shied away from World Bank financing because Latin American governments would have to

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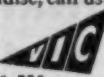
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Report on the new MICHIGAN 12B



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guarantee the loans, thus interfere even more with the company's operations. But it has boosted its Ex-Im borrowings from \$7.1-million in 1951 to \$50.9-million last year.

In the \$500-million five-year expansion, some \$200-million will go to Brazil ("the country with the biggest potential"), \$100-million to Cuba where both the economy and A&FP's big subsidiary are on a sound footing, and \$40-million to Mexico.

Meanwhile, the company has been trying to parlay its atomic-plant plans for all they're worth. In Buenos Aires, Sargent recently said: "There isn't any reason why Argentina shouldn't have one of these plants—if the new government will compensate us for what Peron took away." And it has dangled atom power offers before other countries—partly in hopes of getting rate increases.

• **Much to Be Done**—Some U.S. businessmen have called these present plants "window dressing"—more valuable as goodwill gestures than as immediate solutions to power shortages.

But atomic plants in Latin America make good sense in the long run. Most experts agree that atomic power will (1) save foreign exchange that normally goes for coal purchases and (2) permit location of power plants in outlying areas. With two of A&FP's reactors now on order, the next step will be up to the Latin American countries. They'll have to finish negotiating bilateral treaties with the U.S. for use of atomic fuels and set up their own AEC-type agencies.

BUSINESS ABROAD BRIEFS

French airline hostesses will be an added attraction on Allegheny Airlines planes on Middle Atlantic states routes soon. The regional carrier hopes 15 French hostesses borrowed from Air France will solve its shortage; for Air France the deal provides a promotion stunt to pick up North Atlantic traffic.

• **Pan Am's new DC7s** started flying the North Atlantic this week. The first four—of 25 on order at Douglas—will fly New York to Paris in 12½ hours.

• **Shipbuilding for St. Lawrence Seaway** is under way. Wilson Transit, Cleveland, has started construction of a \$6-million bulk carrier that will carry Great Lakes traffic from August next year, then switch to Seaway cargo in 1959.

• **Licking inflation:** India is encouraging the inflow of Tibetan silver coins, hoping it will soak up heavy government spending. . . . West Germans are thinking of minting gold coins—traditional saving device of European peasants.



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In Business Abroad

• • •

Imports from Japan No Serious Threat, Tariff Commission Tells U. S. Textile Men

U.S. cotton textile makers, battling for protection from Japanese imports (BW—Apr. 21 '56, p172), got a shock this week. The Tariff Commission, traditional home of the protectionists, denied the industry's contention that it is seriously threatened by the Far East imports.

"Textile manufacturers in Japan do not have an across-the-board competitive advantage" the commission said. Washington observers believe the commission's report to the Senate Finance Committee will be ammunition for free traders, will help push the controversial Organization for Trade Cooperation (OTC) through the Congress. The main opposition to OTC has come from the cotton textile industry.

The commission offered three main points to support its contention that Japanese imports are not offering serious competition to most segments of the U. S. industry:

- An exceedingly small part of domestic consumption of cotton manufactures is supplied by imports; the Japanese get only a part of this. On the other hand, the cotton in Japanese textiles shipped to the U.S. last year was only one-fifth as much as Japanese purchases of raw cotton here.

- Many segments of the U. S. industry can stand up to competition of imports. The proof: their substantial exports to countries where the American product gets no preferential treatment. Total U. S. exports exceed imports by a wide margin; exports to Japan itself have topped \$350,000 for two years.

- Although the ratio of cotton textile imports to exports has been rising since 1954, it is still below prewar. The ratio in 1955 was 51%; in 1937, 95%.

The commission report sums up by saying that any threat that does come from the Japanese is to highly specialized segments of the U.S. industry. That kind of problem can be met by the normal "escape clause" procedure in the Reciprocal Trade Act, special across-the-board protection isn't necessary, the commission says.

• • •

Mahogany Importer Finds a Bonanza In the Wake of Hurricane Janet

Freiberg Mahogany Co., New Orleans, which imports mahogany from Mexico, expects to clean up on a windfall.

The company markets about 2.5-million feet of Mexican mahogany annually. That's less than it could sell, but Mexican conservation laws restrict export of this wood. Now Freiberg has a chance to harvest as much as 5-million ft. more—timber that was felled last autumn when Hurricane Janet cut a 90-mile swath across the Yucatan peninsula.

The New Orleans company has flown in more than \$1-million worth of tractors and bulldozers. The job isn't simple. The six-months' rainy season began this month in Yucatan. That means the fallen timber is exposed to damp rot, searing sun, and termites.

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TOMORROW: Use no hands! For in this magic warehouse, orders fill themselves in seconds—electronically.

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used in new Plymouth V-8 Engine Plant



• Beams and cross braces painted the same color as ceiling improves the appearance of the intricate maze of overhead conveyors. Work areas are also made to seem more spacious.

ONE of the most important developments of the vast expansion program undertaken by the Chrysler Corporation is its new multi-million dollar "Qualimatic" engine plant in Detroit, Michigan. Hy-Fire 200 h.p. V-8 engines for Plymouth motorcars are produced here at the rate of 2½ per minute.

• Walls, ceilings, floors, machines, conveyors, motorized trucks and overhead cranes throughout this huge structure are painted according to Pittsburgh's system of COLOR DYNAMICS.

• Exclusive automatic quality control processes have made this plant one of the nation's industrial show places. Newly developed mechanized equipment has supplanted conventional power tools in processing, assembling, inspecting and testing.

• Widespread use of automated machinery has reduced physical effort.

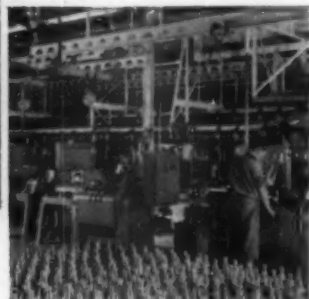
But nervous tension which affects productive efficiency remains to be coped with. This tension is often caused by eye fatigue. COLOR DYNAMICS painting helps to reduce eye strain by the proper use of eye-rest and focal colors which aid operators to see their jobs better.

• Warning and safety colors on machine controls, conveyors, traffic lanes, trucks and cranes alert workers and reduce danger of time-loss accidents.

• COLOR DYNAMICS creates a more attractive, cheerful environment for the work force which contributes to better morale. Employees take greater pride in their surroundings. They help to keep work areas clean and orderly, reducing housekeeping problems.

• Why not test the practical value of COLOR DYNAMICS in your plant? Try it on a machine or two—or in a whole department—and see the difference.

Modern system of painting contributes to quality of production and the morale and safety of workers in Chrysler Corporation's multi-million dollar "Qualimatic" factory.



• Inspectors are assisted in their tasks by eye-rest colors on equipment used to check the alignment of crankshafts.



• Eye-rest colors are an excellent contrast for the panels of signal lights on this battery of 72 automatic "hot test stands".

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INTERNATIONAL OUTLOOK

BUSINESS WEEK

JUNE 2, 1956



Washington is buzzing with speculation about Russia's invitation to the U. S. Air Force to look at its Soviet counterpart.

The invitation will certainly be accepted. And it probably will lead to a reciprocal Russian visit here.

But Washington is firm that this is not a prelude to a meeting of top political leaders—Russia's Marshal Zhukov included. That kind of meeting won't be possible until the Soviets accept some form of Pres. Eisenhower's disarmament plan—"the open-sky" proposals.

And there is no reason to read the invitation as meaning there's a basic change in Russian attitudes. What may be behind it, some observers are guessing, is no more than dissatisfaction on the part of the Russian military leaders, headed by Marshal Zhukov, with the way Communist boss Khrushchev has handled disarmament negotiations.

—•—
The current Venice Conference of the European Coal & Steel Community won't work any miracles for European integration. But it is likely to bring up a draft treaty for an intro-European atomic development agency (Euratom) and a prospectus for a common market.

The possibility of moving fast or far is slim, however. There will be little speed as long as France remains politically weak and preoccupied by North Africa. The big stumbling block in negotiations is likely to be French opposition to West Germany's proposal that Euratom and the common market be tied together. Still, optimists are hoping for a Euratom treaty before the end of the year. Meantime, an interim plan for handling atomic energy in OEEC (Office of European Economic Cooperation) is gaining ground. That wouldn't have to face prolonged debate by the French Assembly.

—•—
Inside France, Premier Mollet is trying to stem the tide of chaos.

Mollet thinks he can do that by winning more time, holding the present coalition together. Toward this end he is:

- Proposing an emergency program of political and economic reforms for Algeria—an answer to Mendes-France. Mendes-France left the cabinet last week because he wanted military pacification balanced with reform.
- Seeking the support of a non-Communist majority. He's ready to throw down the gauntlet to the Communists who have been voting with him in parliament, subverting his efforts on the outside.
- Continuing unofficial, secret negotiations in Cairo with leaders of the Algerian rebels.

—•—
A conflict over economic policies has flared up in Bonn.

Chancellor Adenauer's clashing openly with Minister of Economics Erhard, Minister of Finance Schaeffer, and Bank Deutsche Laender (the West German Fed).

Adenauer isn't happy with the Bank's hard money policies. It has just raised the interest rate from 4½% to 5½%. The Chancellor also opposes tax cuts for industries that are making heavy capital investments. And he is not sympathetic to Erhard's proposals to drop tariffs 30% in an effort to soak up excess purchasing power.

More is at stake than just economic policy. During the last few years the West German Economic Council—including Erhard, Schaeffer, and the Bank—has become a shadow cabinet. In bucking them, the 81-year-old

INTERNATIONAL OUTLOOK (Continued)

BUSINESS WEEK
JUNE 2, 1956

chancellor wants to show the country—and Washington—that he is still the man in the saddle.

—•—
Egyptian Premier Nasser is having mixed results in his campaign to dominate the Middle East.

Nasser chalked up an important success in Jordan. The new commander of the Jordan army is an Egyptian ally, a leader of the young officers who pushed Britain's Glubb Pasha out of command of the Arab Legion. And Jordan's new premier may break the country's remaining ties with Britain.

But Nasser isn't doing so well in Saudi Arabia.

The Saudis—who have been playing Nasser's game in Jordan and Syria until now—seem to be off on a new tack. They have:

- Reaffirmed their refusal to recognize Communist China in the face of Cairo's nod to Peking.
- Canceled Communist Poland's bid to rebuild the Pilgrims' Railway from Syria through Jordan to Mecca in Saudi Arabia.
- Picked up negotiations with the British over the disputed Buraimi Oasis where both U. S. and British oil companies think there is oil.
- Hinted that negotiations with the U. S. over the lease on the Dharan Air Base—now running out—will move smoothly.

All this will strengthen Washington's hand in trying to make Nasser see the light, stop lending aid to Moscow's strategy of penetrating the area.

—•—
The big celebration this week in Moscow is over the return of the prodigal—Yugoslavia's Marshal Tito (BW—Apr. 28'56, p65).

Both Moscow and Tito have changed a lot since Stalin booted the Yugoslav dictator out of the Cominform in 1948. Today the Russians and Tito harmonize on a melody that was composed at the 20th Congress of the Soviet Communist Party earlier this year.

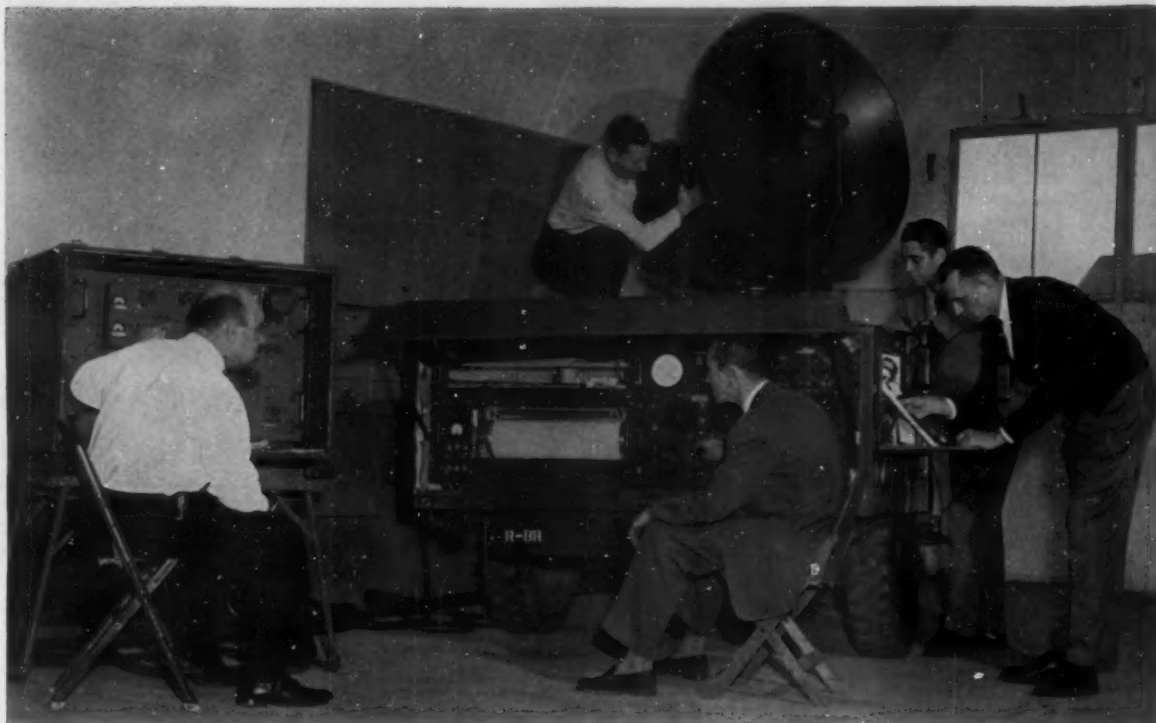
The last differences between Belgrade and Moscow were ironed out before Tito went to Moscow. The last proofs:

- Italy's Communist Boss Palmiro Togliatti flew to Belgrade to kowtow to Tito as the most important Communist leader outside Russia.
- Tito has severed relations with the British Labor Party. That follows Khrushchev's line. He feuded with the Laborites in Britain during his visit.

You can expect the Moscow meeting to be climaxed by a working alliance between the Russian and Yugoslav Communist parties.

—•—
Capitol Hill observers are saying this week that the Administration's liberal trade program will—with luck—chalk up some successes before Congress goes home. It looks as if the bill that would put the U. S. into the new Organization for Trade Cooperation (OTC) will squeak through the House. The Administration will settle for that, come back next year for a fight in the Senate.

—•—
U. S. exporters will be cheered by some conclusions drawn by underwriters from several countries meeting in Cannes this week. They say—despite general belief to the contrary—that the financing terms being offered by the major exporting countries are pretty much the same. They also knocked down stories of long credits. Despite pressure from Latin America and Asia, maximum terms are still five years.



U.S. Army Photograph

Electronic specialists at Ft. Monmouth SCEL Laboratories checking out radar and computing system designed for field use.

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This is one of a series of ads on the technical activities of the Department of Defense

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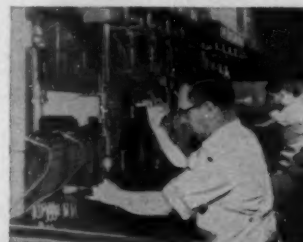


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In Washington

• • •

Tariff's Relation to Defense Comes Under Congress' Scrutiny

A Congress group is about to take a critical look at the doctrine that an industry essential to the national defense is entitled to tariff protection on that ground. Under Rep. Richard Bolling (D-Mo.), a subcommittee of the Joint Committee on the Economic Report will start hearings on the subject next Monday.

The hearings stem from the Trade Agreements Act of 1955, which authorized Pres. Eisenhower to take whatever action is necessary to curb imports that threaten an industry essential to national defense.

The Office of Defense Mobilization, as administering agency, has received applications from 11 industries—ranging from wool textiles to clinical thermometers, and jeweled watches to petroleum. Closest thing to a definitive action has been ODM Director Arthur S. Flemming's plea for voluntary cuts in petroleum imports—with more stringent action implied if this fails.

Here's what's behind Bolling's move. He suspects that "defense essentiality" can become an important basis for getting relief from foreign competition. He thinks that such restrictions on the basis of national security might actually work against the national interest—arguing that U. S. striking power depends on a delicate system of global alliances and extensive bases overseas.

• • •

Uncle Sam Raises His Bid For Science and Engineer Grads

The federal government is becoming a stiffer competitor with industry for this year's crop of science and engineer graduates.

The Civil Service Commission has given federal recruiters permission to offer premium starting pay rates to 1956 Bachelor of Science and Master of Science grads. For B.S. degrees, the starting rate will be \$4,480 per year; for M.S., \$5,335. Each is \$810 above top starting pay in non-technical fields.

To attract physicians, the U.S. now offers \$7,465 to M.D. holders—\$1,070 over last year's starting pay.

• • •

Agriculture Hits Coffee Boost— But Congress Is Now Gun-Shy

That most controversial of commodities, coffee, is back in the limelight. This week, the U.S. Dept. of Agriculture issued a report branding recent price rises as not justified.

World coffee production is up about 18% over last season—yet prices have inched up. Here's Agriculture's explanation: U.S. importers, acting on overly pessimistic

reports on the mild Colombian and Central American beans, placed heavy orders that led to "artificial" price rises. This in turn stimulated prices on the stronger Brazilian beans, which make up the bulk of U.S. imports—despite the surplus crop in Brazil.

Even so, there's likely to be little more than grumbling in Congress—barring some spectacular rises in the consumer coffee price. Here's why: Congress has already investigated coffee twice—most recently in 1954—with notable lack of success in contributing to a formula for stability. There's no enthusiasm evident on Capitol Hill for another such sortie this year.

• • •

Move Starts to Beef Up Treaty Guarding Patents and Trade Marks

U.S. lawyers and businessmen hashed over international patent and trade mark problems in Washington this week with their counterparts from all over the world. The meeting was sponsored by the International Assn. for the Protection of Industrial Property.

The recommendations developed will go to a diplomatic conference, scheduled in Lisbon next year, for revising the 1883 convention for the protection of industrial property. The U.S. has been a party since 1887.

U.S. interests at the meeting pushed these points:

- Protection of chemical products. Unlike the U.S., many foreign countries patent only a chemical process, not the product—so it's not illegal there to import a product made by a patent infringer.

- Protection of service marks, used by a company servicing a product, in contrast to the manufacturer. Almost no countries other than the U.S. now do this.

U.S. lawyers are also worried that other countries might follow the lead of a Denmark law, which they say has the effect of forcing a company to give up pharmaceutical trade marks after 20 years.

• • •

Minerals Producers Win Action On Pleas to Extend U.S. Support

Government support for U.S. minerals producers will continue, though stockpile goals are nearly filled.

The Senate Interior and Insular Affairs Committee has heeded domestic producers' election year pleas for extending the price prop of federal purchases. It will report legislation to (1) keep going for another two and a half years the Office of Defense Mobilization authority—about to expire—to buy tungsten and asbestos; (2) add fluorspar to the list; and (3) direct the Interior Dept. to set up a long-range, peacetime domestic minerals support program.

ODM Director Arthur Flemming and Asst. Interior Secy. Felix Wormser have softened their previous stand that government purchases should end when defense needs are met (BW—May 26 '56, p191). They agreed to continue other ODM purchases as long as possible under existing law, and step up federal exploration and technical development aid to U.S. mines.

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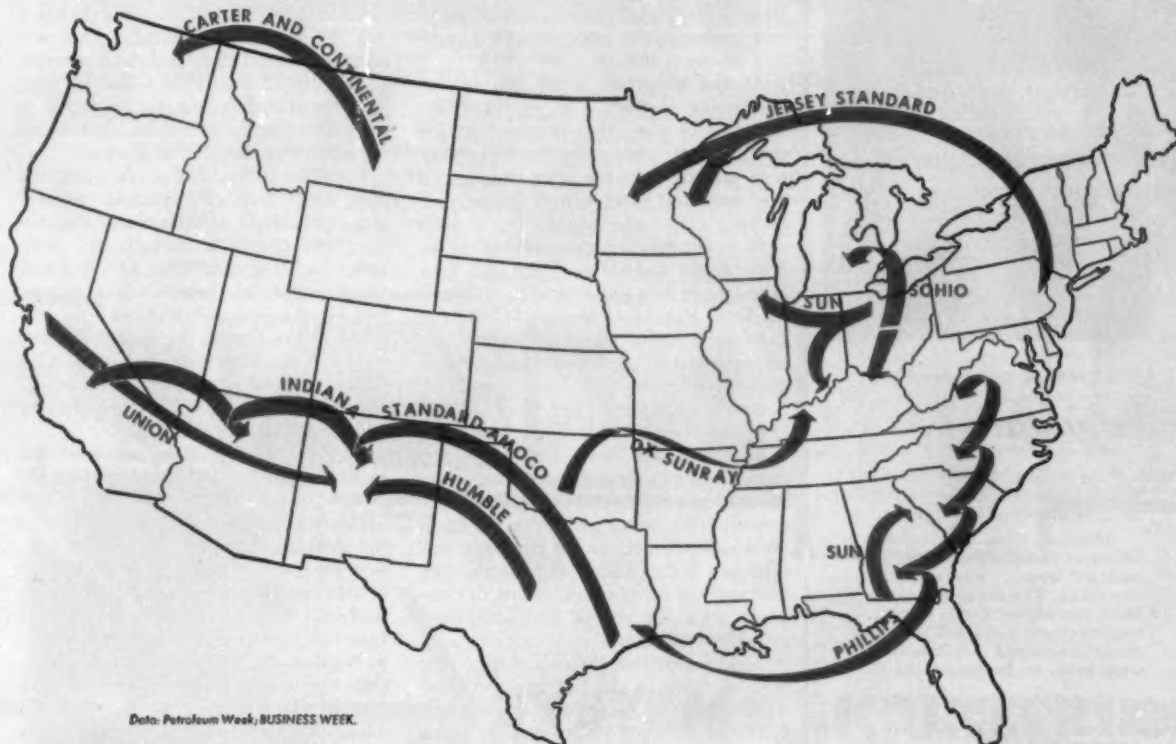
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Data: Petroleum Week, BUSINESS WEEK.

HERE'S HOW THE OIL COMPANIES ARE . . .

Jumping Into New Markets

The oil companies are on the march for new retail outlets. The flurry of arrows on the map above doesn't begin to show the whole picture. Large and small concerns are hopping, skipping, or just moving sideways to get somewhere where they aren't.

This week it leaked out through Petroleum Week, a McGraw-Hill publication, that one more important jump is in the offing: Standard Oil Co. (N. J.) is pushing into the Midwest.

At midweek, the details were still secret. But it was known that Jersey had its eye on marketing and refining properties in Wisconsin and Minnesota. A new brand name that won't conflict with Standard Oil Co. (Indiana), which works this territory, has reportedly been picked, at least tentatively. Whether this would be an operation of Esso Standard Oil Co., Jersey's biggest marketing arm, or some other Jersey affiliate, or of a new concern set up for the area wasn't known.

• **More Room**—This isn't the first sign that Jersey affiliates have given of wanting more room. Early this year, Humble Oil & Refining Co., moved into the New Mexico retail market, where Con-

tinental Oil (Del.) is strong. And Carter Oil Co., in Montana, is settling more solidly into the Pacific Northwest, haunt of Standard Oil Co. of Calif.

Plenty of other companies are doing the same, by one route or another. Gulf Oil Corp. is getting an outlet for its crude (though not a retail business) on the West Coast through the purchase of what could amount to a 25% interest in Union Oil Co. of Calif. (BW-Apr. 14 '56, p. 32). Union itself is pushing into New Mexico.

• **Gathering Steam**—California Standard made a spectacular leap in this direction back in 1946, when it jumped to the East Coast. But today the urge to spread out seems to have gathered new steam. Phillips Petroleum Co. a couple of years ago came crashing from the Southwest to Florida, where Standard Oil Co. (Ky.) is strong, and has been pressing north ever since. American Oil Co. (Indiana subsidiary) has shoved into Texas. DX Sunray Oil Co. is thrusting up and east into Arkansas and Tennessee. Standard Oil Co. (Ohio) has a foothold in Michigan, will open a station in Kentucky early next month. Sun Oil Co. is spreading north

to Georgia, south to Kentucky, and further into west Illinois.

Actually only one company, The Texas Co., currently markets in every state in the union. Gulf and Shell Oil Co. come next, with 40 states (including the District of Columbia). Cities Service Co. markets in 39, Sinclair Oil Corp. in 37, and Phillips in 35.

If you add in subsidiaries, though, there are others that spread out pretty far. Socony Mobil Oil Co. and its subsidiaries cover 44 states. Standard of Indiana with American Oil Co., Pan-Am Southern Corp. (now merging with Amoco), and Utah Oil & Refining Co. cover 40.

• **Resistance**—This means that there are few marketing areas that hang out a welcome mat to newcomers. In the case of the descendants of the old Standard Oil trust, such "invasions" have led to swift efforts at legal retaliation. Right now, for example, Sohio has just wound up a brand name battle with Indiana for the Michigan market, and probably faces another with Standard of Kentucky when Sohio opens a swish new station in Newport, Ky.

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petition means that it is harder for any one company to dominate its traditional market than it used to be. Often it is easier to step up business by moving to new fields than by stepping up competitive efforts at home.

At the wholesale level, this loss of dominance shows up in an increasing disregard of some time-honored pricing practices. Traditionally, one big concern usually initiates price changes in a given market; the others follow suit. Indiana called the signals for a price shift in the Midwest; Socony Mobil in New York and New England; Esso Standard in New Jersey and its southern market. Recently, though, Gulf and Esso both moved ahead of Socony Mobil in boosting consumer tank wagon prices (the price the dealer pays) in Socony's "territory," and Conoco took the lead in Texas.

Moving into new territory often brings some upheaval in pricing, too, though it may not carry through to the consumer's gasoline price. To get an in on a new market, an oil company will offer an independent distributor, say, discounts or other inducements to compensate for the risk of switching from an older customer.

• **Stakes**—But the stakes are big. The primary target is the big, growing gasoline market that looms over the horizon. Every oil marketer in the country wants to make sure he gets his share of the new business. He can't do this if he doesn't have the outlets.

Furthermore, the U.S. population doesn't stay still. Some areas that a decade ago didn't look so promising now give every sign of new, fast growth in population and industry.

Finally, though some of the aggressive movers are short of refining and producing capacity, there's no over-all shortage of capacity in the country, thanks in part to the pressure of the military (BW—Apr.21'56,p160).

A few figures and estimates show the potential of the prize. According to Chase Manhattan Bank, demand has been growing at the annual rate of about 6% over the last 25 years. The bank estimates that in the next 10 years, products demand in the U.S. will rise about 4.4-million bbl. a day. National Petroleum News, a McGraw-Hill publication, reckons that in 10 years total gasoline sales at service stations will rise 40.7%, as the result of an estimated 34% increase in cars on the road.

• **Approaches**—With this kind of prospect, everyone is beating the near and far bushes for his share. How each company goes about it depends on its special situation. Some, Continental Oil Co. for example, with its producing and refining facilities spread out over a wide area, are concentrating on the home market. The growing crop of new grades of gasoline is another effort to

capture the big new-car market (BW—May12'56,p52).

For those who are looking to new areas, excess capacity is some times a spur to secure new outlets. This was what prompted Standard of California to hop to the East with Calso 10 years ago; the company foresaw an excess of oil in California—a surplus that failed to materialize, because of Korea.

Standard of Indiana is one company that has "excess producing ability" woes. Through its subsidiary, Pan-Am Southern Corp., it moved into Kentucky in 1951. Its Utah Oil Refining Co. branched out into Nevada, Oregon, and Washington, while Amoco consolidated its position in the East. Its most recent move—into the Texas City-Galveston area—says Indiana, came when it discovered its employees were buying competitors' gasoline.

Gulf is another company that has plenty of crude, with its rich supplies from abroad (BW—Apr.21'56,p160). Similarly Phillips, generally accounted the most aggressive expander right now, first jumped to Florida to work off some of its excess refining capacity. It makes no bones about going clear up the East Coast to Maine.

• **Needed**—On the other hand, expansion for some companies will call for new producing and refining facilities. Thus, if a Jersey company moves to the Midwest, it may tap its Canadian sources—or it might call on Carter. Since the trend is to put refining facilities close to the market, opening a new market often involves either building or buying refining facilities—or, as in the case of Humble, deals with independent refiners.

Whether to leap or to advance into contiguous areas is a question. Union, for one, believes in advancing from area to area. It passed up Denver, for example, and went into Idaho, a relatively poorer market, because this move involved no drastic jump. Some in the industry feel that Standard of California made a mistake in jumping so far from home.

Union's expansion to New Mexico follows a new pipeline, Southern Pacific Pipe Line Co., from Los Angeles to Phoenix. Till now, Union has felt that high tank truck and freight rates from California to New Mexico made such a move prohibitive.

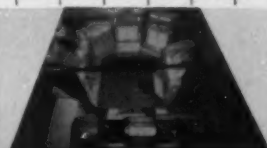
Sun, too, looks kindly on nearby expansion. It seems to be leaning toward the Midwest and West as its chief expansion goals, cites the more stable price situation in those areas. On the other hand, Sun feels that concentrating too heavily on one market makes a company uncomfortably vulnerable to competition in that market.

• **New Setup**—Occasionally, expansion calls for a brand new marketing setup. Thus Union recently bought about 300

	I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII	XIII	
Precision Mechanics, Optical Devices, Ceramics	●●●	●●	●●	●●	●●	●●	●●	●●	●●	●●	●●	●●	●●	
Electrical Equipment and Components	●●●	●●	●●	●●	●●	●●	●●	●●	●●	●●	●●	●●	●●	
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Hydraulics, Liquids Processing, Heat Exchange	●●	●●	●●	●●	●●	●●	●●	●●	●●	●●	●●	●●	●●	
Television: Studio, Theatre, Business, Institutional, Industrial	●●	●●	●●	●●	●●	●●	●●	●●	●●	●●	●●	●●	●●	
Instruments, Servos, Controls: Hydraulic, Pneumatic, Magnetic, Electronic	●●	●●	●●	●●	●●	●●	●●	●●	●●	●●	●●	●●	●●	
Aircraft and Missile Guidance, Control, Simulation	●●	●●	●●	●●	●●	●●	●●	●●	●●	●●	●●	●●	●●	
Automatic Computers and Components	●●	●●	●●	●●	●●	●●	●●	●●	●●	●●	●●	●●	●●	
Radar, Microwave, Ultrasonics	●●	●●	●●	●●	●●	●●	●●	●●	●●	●●	●●	●●	●●	
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Nuclear Power Components and Controls	●●	●●	●●	●●	●●	●●	●●	●●	●●	●●	●●	●●	●●	
SYSTEMS ENGINEERING	●●	●●	●●	●●	●●	●●	●●	●●	●●	●●	●●	●●	●●	



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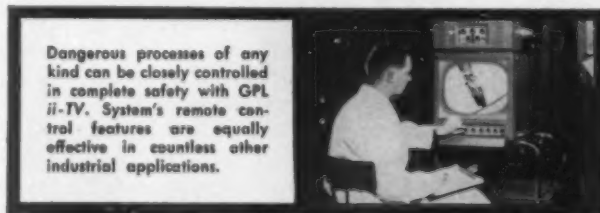
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"... if one Standard trade mark resembles another, conflicts arise . . ."

OIL MOVES starts on p. 145

stations from Sunset Oil Co., 100 of them in the Pacific Northwest. To handle some of the business, it established its first marketing subsidiary, Westway Petroleum Co. Union itself concentrates on premium grades, and some of the Sunset stations were in areas that are more suitable for "price" operations.

Expansion by contiguous markets is a fairly common practice. This is the principle that Phillips has been working on: Get yourself solid in one area, then shove on to the next.

In the case of the various ex-members of the old Standard Oil combine, though, hedgehopping sometimes looks like the best bet. This explains Indiana's venture into the Gulf Coast, which might be called Texaco and Humble's bailiwick. Indiana apparently felt it would be easier to open up this territory than to buck the competition of Standard of Ohio and of Kentucky nearer home.

The current ruckus between Sohio and Standard of Indiana is a good case in point. When the U.S. Supreme Court broke up the old Standard Oil empire in 1911, each of the marketing companies that formed a part of it had its marketing area pretty well established (BW—Jun. 26 '46, p. 71). The separate companies that were formed by the breakup stuck more or less to those territories.

• **Hidden Shoals**—But there's no law against their expanding. The catch is that if the trade mark or brand name of one descendant of one old Standard operation resembles that of another, conflicts arise.

The big question in Sohio's march into Michigan—where Indiana already operates—is whether the name Sohio and the red, white, and blue oval of that company infringe on Standard of Indiana's trade mark and rights to use the Standard name. The Ohio company holds that Sohio is a brand name coined in 1926 for a premium grade cylinder lubricating oil. The product, says Sohio, was described to customers as "a superior Ohio oil," which shortly came down to Sohio.

Standard of Indiana and of Kentucky don't agree. They insist Sohio is a contraction of the corporate name, cite a Sohio employee handbook that says so.

The Michigan suit has been argued in Cheyenne, Wyo. Both sides have had their say, but a decision has not yet been handed down. Whatever the outcome, it is sure to be appealed. **END**



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Waste paper baskets are now a waste themselves

This man is making use of one of many innovations found only in Shaw-Walker *Organized Desks*. It's a wastebasket drawer. Out of sight, instantly accessible, easily removed, it holds more paper than four ordinary wastebaskets. Saves time, floor space and stumbling.

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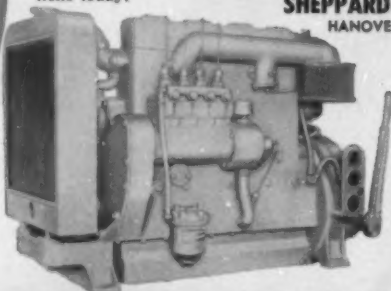
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Car Price Guides

New services available for consumers and lending agencies list what dealers pay for new cars.

Just how much is a new car worth? That's a question a lot of car buyers, banks, and even bootleg auto dealers are asking themselves with increasing frequency. As a result, new services are now available to provide the answers.

• **Price Confusion**—A look at the confusion in new car retailing during the past year or so will tell you why it's so hard to know the actual value of a new car. The pressure on new car dealers to move heavy inventories has forced many of them to entice buyers by offering terrific trade-in allowances. But a dealer offering such a "bargain" may compensate by "packing" the price of the new car and optional accessories \$1,000 or more above the usual selling price.

Deals like this have made many buyers lose faith in dealers' selling prices.

And banks and other lending agencies have been discovering that in some cases they have been lending a car-buying client more money than the car would be worth if they had to repossess it. That's because the selling price listed on the sales contract exceeded the value of the car. And also they've been lending amounts equal to the actual value of the car because over-allowance on trade-ins enables the buyer to put practically nothing down on the purchase.

• **New Services**—Now Yegen Guide, published by Yegen Associates, Teaneck, N. J., the Automobile Invoice Service Co.; and the American Installment Credit Corp.'s Dealer Cost Schedule send out reports to banks and other lending agencies listing dealer invoice prices on all makes and models of new cars and on optional equipment.

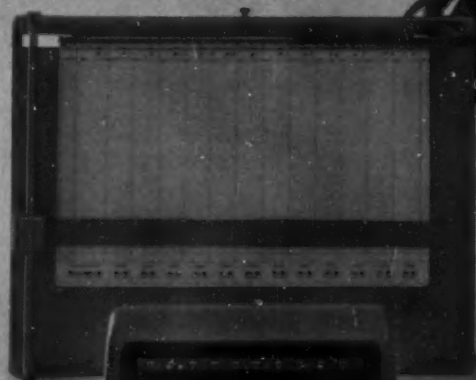
With these figures, a bank can base the amount of an auto loan on the price the dealer pays, making it almost impossible for him to offer phony trade-in allowances and charge "packed" prices.

For consumers, a new booklet, Car Fax, published in New York, lists the factory-suggested prices on cars and optionals.

New car brokers and the so-called, "bootleggers" or nonfranchised car dealers might also be customers for the new service. They operate on slender margins, have to know what the franchised dealers from whom they buy their cars have actually paid. One unfranchised dealer examining a sample copy of one of the new price reports was astonished to find he was paying packed prices himself. **END**

in summarizing expenses, sales, labor ...
in all business figuring ...

**THIS
TEAM
LEAVES
TIME
BEHIND**



*

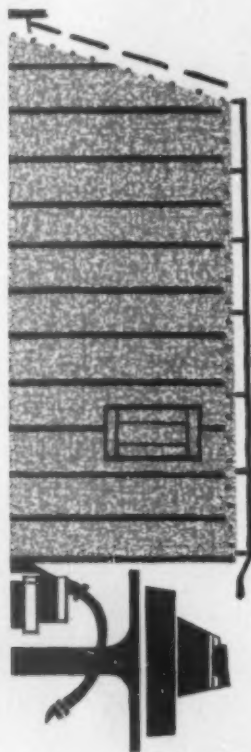


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National supplies oil seals for roller freight journal boxes, generators, compressors, vehicles and other equipment railroads use—and has provided over 1,000,000,000 additional oil seals for America's cars, trucks, tractors, aircraft, machinery and household appliances.

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In Marketing

. . .

Appliance Makers Announce Plans To Promote Kitchen Remodeling

Two appliance manufacturers have given the nation's kitchens some special thought and come up with two different plans. Both are designed to encourage kitchen remodeling but one draws the dealer into the forefront, while the other leaves the consumer on his own.

General Electric Co. has announced a plan to permit a customer to finance a complete remodeling job on his kitchen through the GE Credit Corp. This is said to be the first time an appliance maker has made such an offer.

The Crosley & Bendix Home Appliances Divs. of Avco Manufacturing Co. is putting out a do-it-yourself kit to enable the consumer to remodel his kitchen himself.

These schemes fall in line with manufacturers' efforts to sell complete kitchens rather than separate pieces of equipment. And they're a fresh breeze for Operation Home Improvement launched earlier this year (BW—Jan. 21 '56, p150).

Under GE's plan, a homeowner or long-term renter can go to a GE dealer and arrange to have his kitchen entirely made over. He has to buy at least two major appliances, one of which must be a built-in unit. Then the dealer will act as a contractor to arrange for any plumbing, wiring, and carpentry that has to be done. The consumer can arrange to pay for the whole job in monthly installments.

To make it possible for the dealer to carry his expenses, GE will permit him to finance his own costs until the installation and the customer's financing are completed.

Crosley & Bendix's do-it-yourself kit is designed to tempt the consumer to transform his own kitchen. The kit was developed for Crosley & Bendix by the Easi-Bilt Pattern Co. It sells for \$1.

Crosley & Bendix claims a skillful home improver can use the kit to save up to 50% of the cost of remodeling his kitchen.

. . .

1956 Preference Report Charts

Vagaries of Consumer Buying

The 1956 study in Consumer Preferences in 21 Markets gives the latest look at some of the vagaries of consumer buying. This report, covering a total of 60,000 families, is compiled each year by newspapers in 21 cities. It takes in a multitude of products—from soda crackers to automobiles.

The consolidated analysis is a good reflection of the strains and stresses of competitive promotion battles. A case in point is the preference in lipsticks. In 1955, Hazel Bishop was the No. 1 lipstick in 13 of the 21 markets surveyed; Revlon was tops in 5. This year—with a bow to the \$64,000 Question—Revlon leaped to top place in 19 areas, leaving Hazel Bishop only 2.

Among filtered cigarettes, Viceroy takes top spot among women, though Winston is gaining ground. On the other hand, Winston has come up fast among men smokers, outrunning Viceroy in 14 markets against Viceroy's 6. For nonfilter smokers, Camels hold their No. 1 place among men.

In car ownership, Chevrolet claims 20 of the markets. But among those planning to buy cars, there's a switch. In 1955, 12 out of the 21 markets voted Ford their No. 1 choice against 9 for Chevrolet. This year, Chevrolet outranked all competitors in 13 markets, with Ford claiming 8.

The growth of convenience foods is reflected in the findings. One example: In 1954, median product use of frozen chicken or turkey pies in all markets was 19.9% of the total market; this year, it's 41.6%.

. . .

NBC Blasts Back at Attack

On TV Option-Time, "Must Buy" Deals

The country's three TV networks, which have been under heavy fire recently, are shooting back.

NBC this week filed a lengthy brief with the Senate Commerce committee in answer to testimony by Richard A. Moore, president of KTTV, Los Angeles, who let go a sweeping attack on the nets before the committee last March (BW—Apr. 28 '56, p142).

The core of NBC's statement was a defense of option-time and so-called "must-buy" arrangements that Moore urged the FCC to abolish, charging they violated antitrust laws. (Option-time is the part of the broadcast day that nets may require their affiliates to devote to network programs. "Must-buy" stations are the minimum number a national advertiser must pay for to advertise over the network.)

NBC says "the attack on option-time and on the policy of selling a basic network is an attack on the very foundation of the network system."

To the charge that the nets hinder TV film production, NBC cited figures to show that use of film on TV is expanding.

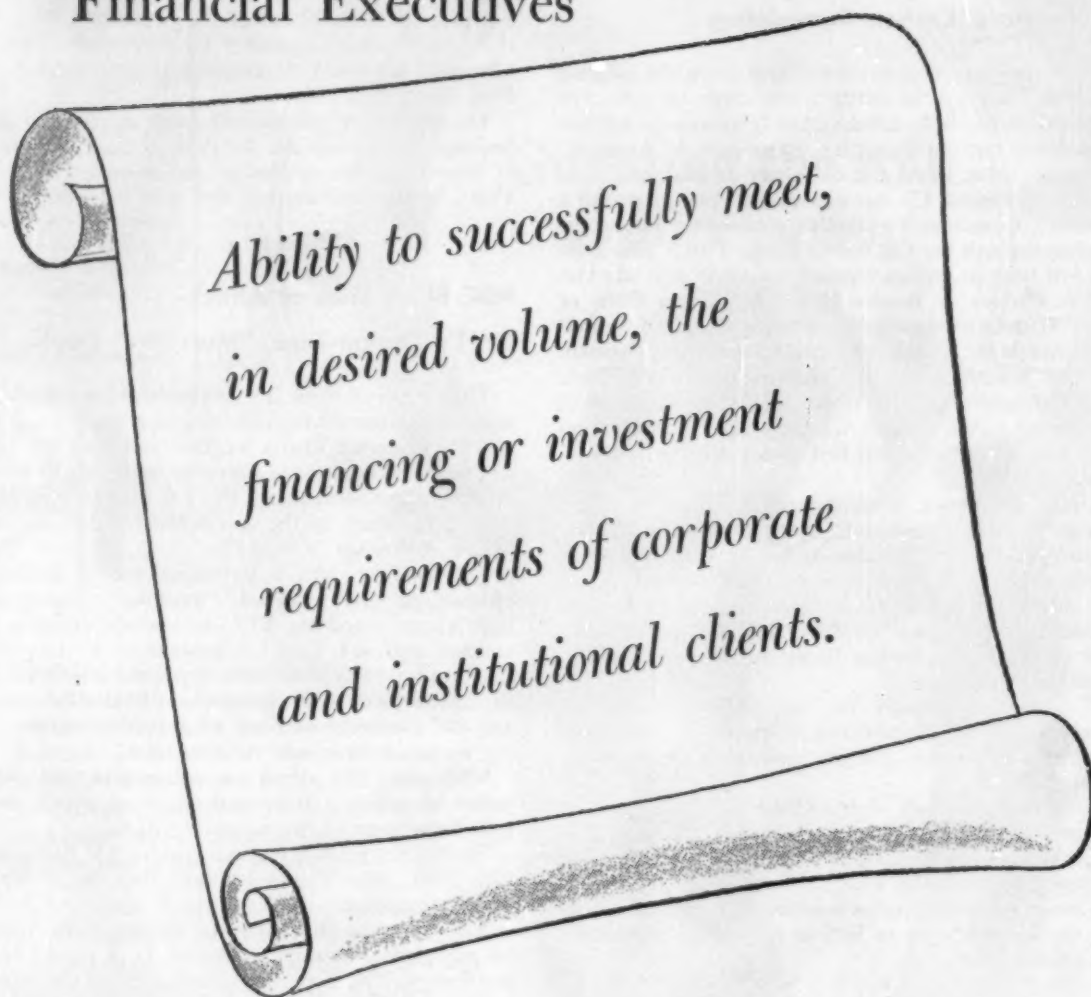
NBC asserted that Moore's charges were "part of an organized campaign" financed by a group of film syndicators. The statement named some of the country's biggest syndicators, Ziv Television Programs, Inc., Television Programs of America, Inc., Official Films, Screen Gems, Inc., and RKO Teleradio Pictures, Inc.

NBC declared that the nets built up the TV industry, and are responsible for experimental and quality programing. Should they be weakened or destroyed the public would get a "continuing flow of stale and stereotyped film product" on its TV screens.

The just-formed Assn. of TV Film Distributors, which includes four of the syndicators named by NBC, denied that syndicators wanted to destroy networks. It would be "economic suicide" to do so, the association said.

In Los Angeles, Moore agreed that he had consulted "film distributors and other TV stations." He declared there was nothing wrong with this. "NBC . . . apparently expects that the victims of its restraints should lick their wounds separately, privately, and passively," he added.

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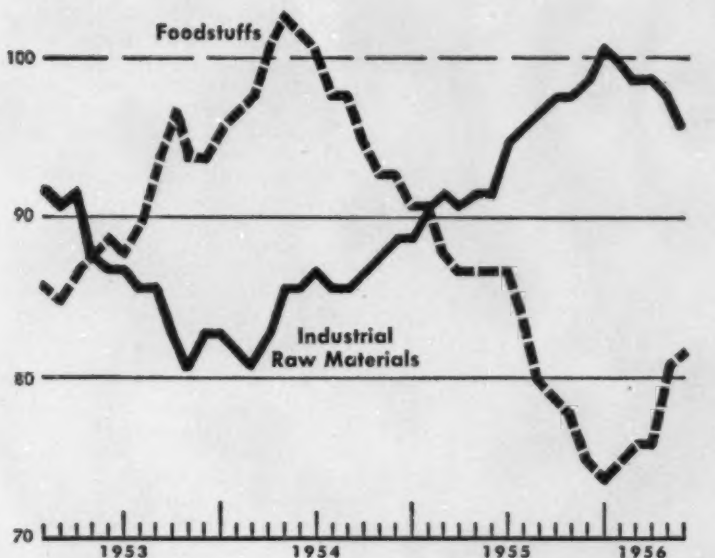
DALLAS

WEST PALM BEACH

THE MARKETS

Repeat Performance?

Spot Prices (1947-49=100)
110



Data: Bureau of Labor Statistics.

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Commodity Trends Turn

Prices of the raw materials used by industry have fallen under the worries that are afflicting many lines of business (page 26). Meanwhile, food prices have stiffened—partly under seasonal influences and partly due to election-year farm doctoring.

These swings rather strikingly reverse the patterns traced by average prices of these two types of commodities in earlier months (chart).

It had become commonplace to talk about rising industrial prices, declining farm products and foods, and the two movements washing one another out in the over-all averages. Now, it might be noted, there still is that somnolent stability in the over-all averages, but the movements that are washing out are the exact opposite of earlier trends.

The reversal is spotlighted by two leading performers—one from each group. Copper scrap has been conspicuous in the up-and-down of the industrial raw materials' index; hogs have been quite as spectacular in the down-and-up for foodstuffs.

• **Typical**—Factors involved in the

movements of copper scrap and hogs are more or less typical for their groups:

Copper scrap—Prices ran up from a 1954 low of about 23¢ to very near 47¢ a lb. and now have tumbled about 10¢ from the high. The reason for the rise was, of course, the months-long scramble of consuming industries for all the copper they could get in any form. Buyers of scrap had to pay for remelting, and the result in many cases was a total price that represented a substantial premium over leading producers' charge for virgin metal. And then, when the price of raw copper unexpectedly turned soft in London (BW—Mar. 31 '56, p19), buyers here became suddenly cautious. One of the quickest indications was the way they backed away from premium prices they had been paying for copper scrap.

Hogs—Record slaughter in the late months of 1955 and early 1956 (in combination with record supplies of beef) carried average prices to a postwar low below \$11 a cwt. in Chicago. That bottom was touched in December, but the real rally—which has carried to above

\$18—didn't get under way until March. By that time, slaughter runs were off seasonally. Moreover, the government was buying pork products for its school lunch and other surplus-removal programs and was also promoting exports of a principal slaughter byproduct, lard. These stimulants, plus a certain sentimental stiffening imparted by pending farm legislation, sent prices kiting.

Troubles that beset copper scrap are fairly typical of what can be expected when industry gets a mite uneasy over the general level of its raw materials inventory. There have been somewhat similar movements in steel scrap, while most of the nonferrous markets are feeling a decline in demand. Industrial consumers simply are following a more conservative course on purchases while they wait to see whether there is going to be an autumn pickup in business.

• **Rubber Unrest**—But there are special situations that have contributed to price weakness in the industrial raw materials beyond these inventory qualms. Rubber is an example.

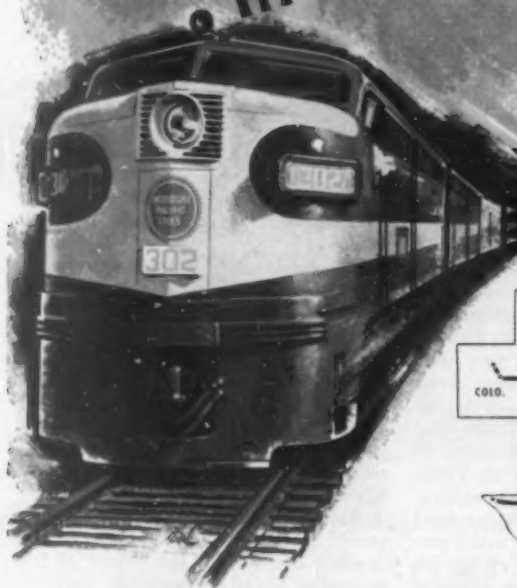
The price of natural crude boomed, first on political unrest in Far Eastern producing areas and then on the unprecedented demand for original equipment tires to shoe all the new cars turned out last year. The price, in fact, got up to where it was about double the cost of competitive synthetic rubber. This very quickly stimulated production of synthetic, and then the auto industry went into its deepening decline. Between the two, natural rubber tumbled from above 50¢ a lb. to about 30¢.

But while scarcities ruled throughout late 1955 in the industrial commodities, the surpluses were growing in farm products and foods. No great progress can be reported to date in removal of the surpluses of grains and cotton, but upward revision of next year's support levels has bolstered prices. Besides, the new farm bill, with its promise of a reduction in future surplus production, has improved market sentiment.

• **Fats and Oils**—There also was a period, several weeks in duration, of marked strength in the prices of fats and oils. Mainly responsible were accelerated exports to western Europe. These were necessary to augment stocks that were depleted by last winter's record cold and imperiled for some time to come by damage done to olive groves and other edible oil crops.

Coffee prices have turned for the better now that efforts are being taken to remedy Brazil's currency situation. The upturn, in fact, was marked by general retail advances last week. But there is little fear now of any runaway rise such as caused consumer resistance two years or so ago. **END**

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ROUTE OF THE EAGLES

Wall St. Talks . . .

. . . about demand for credit . . . performance of investment trusts . . . price trends of industrial raw materials.

The monetary authorities, says Henry C. Alexander, chairman of J. P. Morgan & Co., should make money somewhat more available but interest rates should not be reduced. "Supply and demand should determine" the trend of the latter, he says, and "in my judgment the total demand for bank credit will continue . . . pressing for some time. . . ."

How have the investment trusts performed lately? Here are the drops that per-share asset values of 10 varied funds recorded at a time when Standard & Poor's daily industrial stock price index was showing a 9.2% decline: Three showed drops of 7.2% to 9.2%, five were off 6.1% to 6.7%, two were down 5.2% each.

Two of last week's big secondaries (those involving the sale of hefty blocks of Jersey Standard and Commonwealth Edison commons) are said to have represented liquidation—for tax purposes—by the estate of Frank Gould.

Streeters are watching closely current price trends among prominent industrial raw materials. Here's that picture, according to the National Assn. of Purchasing Agents. **Showing drops:** brass, copper, paper and steel scrap, rubber, and tin. **Headed upward:** aluminum, coal, corrugated cartons, electric motors and equipment, gasoline, lumber, magnesium, paper, raw sugar, steel, steel pipe, vegetable oils.

Confidence continues high in the corporate new issues market. But new-issue buyers, Streeters find, can still be quite picky and choosy. A large part of last week's offering of \$30-million Consolidated Edison Co. 3½% bonds, for example, remains undistributed. Priced to yield 3.55%, they have thus far been considered "too rich" by institutional buyers. This week underwriters are offering \$25-million new Rocky Mountain States Tel & Tel bonds on a 3.45% basis.

Market letter gleanings: "Few . . . institutional people . . . apparently are greatly concerned about their stockholdings or . . . business. . . ." (W. E. Hutton & Co.) . . . "The sequel should be either a 1946 type of decline of 25% or so . . . or the 1951-53 type of consolidation in a 15% trading range." (Walston & Co.)

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Bundle of Atomic

SINCE HIS TEENS, Jerome D. Luntz has been a bundle of energy. At college he edited school magazines and newspapers while earning his Bachelor of Electrical Engineering degree.

In 1944, after a session at Oak Ridge, he was electronics engineer in instruments research at the National Advisory Committee for Aeronautics' Cleveland laboratory. Then, in 1946, he went to the University of Minnesota to teach electrical engineering.

Jerry joined McGraw-Hill in 1947 as Assistant Editor of *Nucleonics*. In turn he became Managing Editor, Executive Editor and, in 1953, Chief Editor.

Besides editing a magazine for the highly secretive atomic industry, Jerry has found time to help organize the American Nuclear Society, serving as chairman of the organizing committee and of the interim board of directors. He is a founder and now president of the Nuclear Energy Writers Association; he is a member of the American Physical Society and is active on the nuclear energy commit-

tee of the Institute of Radio Engineers.

In addition to many speaking engagements and regular visits to government and industrial atomic energy installations, Jerry has covered many "firsts" in his field—groundbreaking for first U.S. civilian atomic power plant, launching of the Nautilus, and first "open" atomic bomb test. But his greatest experience was his coverage of the historic Atoms for Peace Conference in Geneva last summer. Before the conference ended, on August 20th, he had interviewed the key atomic experts from all over the world and early in September his readers received a complete report of the proceedings.

In experience . . . in knowledge of his job . . . in ability to serve his readers, Jerry Luntz is typical of McGraw-Hill editors. They're specialists. They know their fields. They live with the problems of the men who look to them for accurate reporting of news that is vital to their industry. That's why every McGraw-Hill publication provides the best possible audience for your advertising.

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PERSONAL BUSINESS

BUSINESS WEEK

JUNE 2, 1936



Almost everyone who invests his surplus cash in the stock market has discovered that there are many ways of doing it. Yet too often he fails to concentrate on tax angles that can make a tremendous difference in terms of his ultimate gain or loss.

The basic fact always to keep in mind, of course, is that "dividends" are still taxed at high rates. The important job is to keep that tax down as much as possible.

The most common way is to get as many dividend exclusions as you can. In other words, if you buy securities in just your own name, you get a dividend exclusion of \$50. But if you buy the same stock in your name and your wife's, you get a total exclusion of \$100. Additional exclusions of \$50 each are allowed to each member of your family owning stock.

You don't get too much more of a tax break if you make your investments by way of partnership rather than individually—ultimately, the dividend exclusion applies in the same way. Main advantage of a partnership is that you can pool funds to buy investments that you might not want to make alone.

Using a corporation setup, on the other hand, offers certain areas of tax saving. First of all, dividend income received by a corporation gets an important tax break—only 15% of its dividend income is taxed. Thus if your corporation is in the 30% tax bracket, it pays a tax of only 4.5% on its dividend income; if in the 52% bracket, only 7.8%.

Figures like these look mighty attractive—so attractive that there's of course a catch: How do you get the corporation's income into your hands without too high a tax cost?

If it is distributed to you, it's taxed again as a dividend. That knocks out any tax saving you might already have made. The way to get around this, so as to realize important tax savings, is for the corporation to accumulate its earnings. Then they will eventually be capital gains—either when you sell your stock or liquidate the business.

But once more you run into obstacles. First, there is a stiff penalty tax against personal holding companies—a surtax of from 75% to 85% in addition to ordinary corporate rates. Second, unreasonable accumulations of earnings by a corporation are hit by another penalty tax.

When does your corporation become a personal holding company? That depends on the nature of its stock ownership, and the source of its income. If at any time during the last half of the tax year more than 50% of the outstanding stock is owned directly or indirectly by no more than five individuals, it can be a personal holding company.

To escape this, a close corporation would have to have at least 10 unrelated stockholders each holding an equal amount of stock. (Note that stock owned by members of your family, trusts, estates, and partnerships in which you have an interest are counted as being indirectly owned by you.)

But even if you do get caught on this point, you can still avoid the personal holding company status if less than 80% of the corporation's gross income comes from dividends, interest, gains from property sales, royalties, certain rents, and other types of investment income.

PERSONAL BUSINESS (Continued)

BUSINESS WEEK

JUNE 2, 1956

As for the second obstacle of "unreasonable accumulations," that is not so severe as the personal holding company surtax.

For one thing, there is no penalty if accumulations of earnings don't exceed \$60,000. To avoid the penalty tax over that amount, you must show that the excessive accumulations are needed for reasonable business needs, such as expansion plans.

If you can't show that need, the penalty rate on unreasonable accumulations is 27½% of the first \$100,000 of undistributed earnings, 38½% on money over that.

But since individual rates run up to 91%, this penalty is often worth risking: The tax of even 38½%, plus a 25% capital gain tax that might follow eventual liquidation, might still be much less than if you got the earnings as dividends.

Travelers checks have a lot of advantages that even people who use them a lot may not realize. Most important is that if they are lost or stolen you can get a full refund on the amount.

About 75% of all travelers checks are issued by American Express Co. Most of the rest are issued by Bank of America, First National Bank of Chicago, and the First National City Bank of New York.

No matter which source your checks are from, get in touch with the nearest representative of the issuing agent in case of loss. They will make arrangements to have your money refunded promptly.

Cost of travelers checks to the purchaser is \$1 for every \$100 (recently raised from 75¢), or 1% of the total amount purchased. They are good indefinitely. So it's a good idea not to cash in those you have left over from a trip, but save them for emergencies—such as a need for cash on a Sunday when you can't cash a regular check.

If you want to send money to someone abroad, you can arrange with your bank to have it delivered as American Express travelers checks for no extra charge. The advantage is that the recipient can cash them any place in the world, and the money is delivered in dollars.

Travelers checks come in denominations of \$10, \$20, \$50, and \$100. Most popular today is the \$20 denomination.

Still another effective treatment for poison ivy is Myratrol. It is made from extracts of a plant that is the natural enemy of poison ivy, and is said to give almost instant relief from itching, and speed drying of rash.

Note for gardeners: A new planting tool, called "Don's Dandy Digger" assures plant and bulb planting at the right level, eliminates stooping and bending. It's a simple steel tube with a saw-tooth edge. Correct depths of particular plants are listed on the tube. Available at garden supply stores for around \$3.50.

Manners and modes: A new cordial, called Mandarin, is distilled from the peel of the tangerine. . . . You can shoot craps with a pair of pencils now on the market. They're imprinted with one to six spots on each of their six sides, can be rolled like dice. . . . Only 20% of Broadway theater tickets are sold to people outside the New York metropolitan area. . . . Nearly half the 1956 cars are equipped with windshield washers.



Robert Gair Company, Inc., New York, N. Y., developed this new type of white-pigmented polyethylene-coated paperboard carton in conjunction with Bakelite Company engineers.

Paperboard coated with polyethylene resin . . .

New way to improve packages

A coating based on BAKELITE Brand Polyethylene Resins gives brand new sales features to paperboard and boxboard cartons. For coffee ring packaging used by Drake Bakeries, Incorporated, Brooklyn, N. Y., the bottom and sides of the carton are coated on the inside. This produces a glossy white sparkling appearance and prevents unsightly staining of the carton. It also helps prevent sticking, and helps to prevent baked goods from drying out. Net result: fresher taste . . . fresher looks . . . faster sales.

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packaging
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THE SHORTAGE OF SCIENTISTS AND ENGINEERS: Are We Losing the Race with Russia?

THERE is new confidence in the Kremlin. One key reason is expressed in a recent boast of Communist Party Secretary Khrushchev: "The capitalists always regard our people as being backward, but today we have more engineers and more supporting engineering technical personnel than any capitalist country." He promised that this lead would be widened and that communism would be victorious without war.

This boast cannot be dismissed as communist propaganda. Admiral Lewis L. Strauss, chairman of the U. S. Atomic Energy Commission, has warned: "In five years our lead in the training of scientists and engineers may be wiped out, and in ten years we could be hopelessly outstripped. Unless immediate steps are taken to correct it, a situation,

already dangerous, within less than a decade could become disastrous."

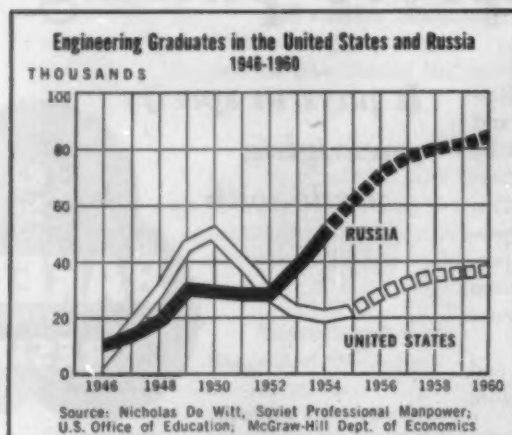
This second editorial in a series on the shortage of scientists and engineers is designed to explore as carefully as possible the facts and the implications of the new emphasis on technical training in the Soviet Union. It draws heavily from the authoritative book *Soviet Professional Manpower*, prepared for the National Academy of Sciences and the National Research Council by Nicholas DeWitt of the Russian Research Center of Harvard and released recently by the National Science Foundation.

Trend Is Against Us

If the Soviet Union already has a lead in technical manpower, it is not very great. Both the United States and Russia now have around a million scientists and engineers. About a third of the Russian engineers were trained on inferior pre-1935 standards. **It's the trend — shown in the chart — that is alarming.**

Over the last five years we have turned out only 142,000 engineers, compared to an estimated 216,000 in Russia. In 1955 our output was around 23,000 compared to their 63,000. Over the next five years our projected output is 153,000, against at least 400,000 in Russia. There will be an additional 150,000 or more in the satellites and Red China.

In Russia, 30% of the college students are in engineering, compared to 8% here. Another 30% or more take degrees in natural sciences. Moreover, unlike ourselves, the Russians are



ploughing back a large proportion of their science graduates into teaching, which implies a rapid buildup in the future.

Quality As Well As Quantity

It would be foolhardy to assume that these new Russian graduates are inferior to ours in the quality of their technical training. They start out with much more intensive mathematical and scientific preparation at the high school level. They study harder and longer in college, with more laboratory work and more practical training. Their courses and textbooks seem to be as thorough as ours. Even though the Russian graduates may be overspecialized, they get results.

These results have been striking. The Russians developed both A-bombs and H-bombs faster than we expected, and it's not certain that they had to rely much on espionage. They pushed ahead of us for a while in jet fighter design, and they showed up with a fleet of long-range bombers well ahead of schedule. They are crowding us on nuclear power, electronics and automation. There are grave fears that they have established a lead in the vital field of military rockets.

The goal of Soviet scientific manpower policy includes not only weapon supremacy but also leadership of the neutral and uncommitted areas of Asia, Africa and the Middle East. The Soviet leaders may be bluffing in their offers to export capital, but they are preparing to export Russian scientific and technical know-how in a big way.

How They Do It

The Russians are determined to win the race for scientific supremacy, and they do not count the cost. **They pay their scientists and engineers salaries that seem fantastic when compared with other Soviet incomes.**

Senior professors, research scientists and top engineers are a major segment of the Russian elite. Their incomes are frequently six to ten times the average industrial wage. (In the U. S. six to ten times the average industrial wage would be \$25,000 to \$40,000 a year.) Housing and other privileges are correspondingly lavish. While preaching equality, the Soviets use capi-

talistic incentives far more boldly than we do. Indeed, practicing engineers and scientists have been complaining about the exalted status of professors and top research people, and salary scales are now being adjusted to give greater emphasis to practical results.

The Russians are also generous in their aids to education. Tuition has just been made free at all levels. Undergraduates receive 200 to 500 rubles a month and graduate students 800 rubles (about equal to an industrial wage) to cover living expenses. The biggest stipends go to science and engineering students. College students are deferred from military service, and engineers and scientists often enjoy continued deferment even after graduation.

Finally, the Soviet leaders can channel engineers and scientists — and all other human and material resources — into any area they choose. And the areas the Soviet leaders choose are predominantly those that contribute to military or political objectives, rather than to a better life for consumers.

What's Our Answer?

We are certainly not going to adopt Soviet methods. We do not want scientific robots, but free men, able to understand and add to our democratic heritage. At the same time, our world leadership in technology — and perhaps even our survival as a nation — will be threatened if we allow ourselves to lag far behind Russia in the training of scientists and engineers. Ways to keep the United States in the race will be discussed in a later editorial in this series.

This is one of a series of editorials prepared by the McGraw-Hill Department of Economics to help increase public knowledge and understanding of important nationwide developments of particular concern to the business and professional community served by our industrial and technical publications.

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Donald C. McGraw

PRESIDENT

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REGIONS

Governors

The man running through these pictures looks more like a salesman than a governor, but don't be deceived: he is both.

Gov. William C. Marland of West Virginia is one of a number of governors who in recent months have taken to the road to sell industry on the idea of locating in their states. And Marland has been more active than most, leaving his office one week out of four.

Flying from coast to coast to speak at luncheons and buttonhole executives in their offices, he has been praised, ignored, and scorned. But—and this to him is most important—he has made people think of West Virginia.

• **Tactics Vary**—His one-day stands in 21 major industrial centers are not typical of the way industry-seeking governors operate. Others use, or appear to use, lower pressure, trying to ingratiate themselves with their hosts. He has bulled straight into hornets' nest.

Nor are Marland and his traveling colleagues typical of all governors. Some don't consider soliciting industry as part of a governor's job. They feel making a pitch for industry would lower their dignity, are content to let their state development commissions and chambers of commerce do the work. Others are preoccupied with politics.

But Gov. Marland maintains he has a job to do—"the most important single program in the state"—to provide work for the unemployed.

I. Why Marland Began It

The idea for his campaign goes back to 1954 when a slump in the coal indus-



GOV. MARLAND stages "governor's luncheon" in Philadelphia to tell businessmen about opportunities in West Virginia. Here, he talks to engineer Thomas Nevins.



GOVERNOR greets C. D. Clement, of Philadelphia Chamber of Commerce.

Who Sell Their States

try threw over 50,000 out of work. The state called in the consultant firm of Arthur D. Little, Inc., of Cambridge, Mass., to do a study of the West Virginia economy.

The Little researchers found that mining—which accounts for 17.1% of the state's personal income—was second to manufacturing, but the manufacturing industry was dominated by three fields offering little hope for placing unemployed miners: iron and steel, stone-clay-glass, and chemicals.

• **Potential Industries**—The state's natural resources, labor surplus, proximity to Eastern markets, and power facilities, Little suggested, would lend themselves to woodworking, metal fabricating, electronics, and apparel.

Gov. Marland decided on an industrial development program, aimed particularly at these industries, and hit the road. The Little people arranged luncheons and interviews in advance.

Last month's visit to Philadelphia—his second there—was a fair sample of how he operates, as shown in the pictures.

• **Luncheon Gatherings**—Key men in growth-minded companies are invited to "the governor's luncheon." As they arrive, they are met by Gov. Marland and Andrew V. Ruckman, director of the West Virginia Industrial & Publicity Commission.

As the 30 or so guests move to sit down, Marland jovially welcomes them to "the state of West Virginia." After the appetizer, a color movie runs through the reasons the state is looking for industry, what it has to offer, why it is a good place to live.

When the guests resume eating, Marland hops tables—a chair is left vacant at each table for him. After lunch, he answers questions—mostly about taxes.

It all appears quite casual, but the luncheons are run tightly. He doesn't want to take up more than two hours of the busy men's time.

• **And Conferences**—In the afternoon, Marland may go to offices of select executives or may entertain them in his hotel room.

Sometime during the day, he will have held a press conference. Most of these have found him hammering on the idea that he isn't trying to take a state's industry away. All he wants, he says, is that these companies think of West Virginia for their expansion.

He has been particularly on the defensive since he asked New England executives to meet him in Boston, Providence, and Hartford.

• **Official Resentment**—Gov. Abraham A. Ribicoff of Connecticut wired Marland ahead that he should stay at home. "There would be a wide and deep resentment of a trip intended to try and take away our industries," Ribicoff warned. Eventually, Ribicoff changed plans that had called for him to be out of town that day and the two governors met briefly.

Gov. Dennis J. Roberts of Rhode Island, too, telegraphed Marland that his visit would "serve no useful purpose." But Marland came. Because of bad flying weather, he was hours late, missed his luncheon guests (BW—Apr. 21'56,p36), and only called Roberts on the phone.



BEING A SALESMAN for your state is part of governor's job, Marland believes.

In Boston, Massachusetts Gov. Christian A. Herter subtly suggested that by the time Marland got home, he would discover that West Virginia's industries were setting up plants in New England.

The New England governors were sensitive not only because they have been losing industry to the South, but also because during last year's floods other states tried to lure the stricken plants away.

• **Mixed Reception**—More recently, Gov. Marland ran into a mixed reception in Syracuse, N. Y. He held a closed luncheon for over a dozen men, and offended trade associations by not advising them of his coming. The president of the Manufacturers Assn. of Syracuse was invited as an individual, but he didn't go. The president of the Chamber of Commerce, who wasn't



QUESTION is put to Gov. Marland by one of luncheon guests, James Duffy, president of Kellett Aircraft Corp.

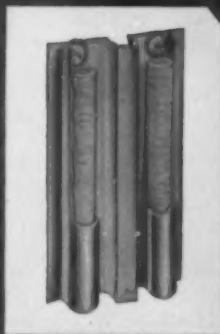


TABLE-HOPPING, the governor chats with Louis Sherman of Thiokol Chemical.

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KEYSTONE WIRE for Industry



FLORIDA'S GOV. COLLINS traded sun for snow on a Cleveland junket.

invited, said he didn't think "it's quite the effective way of getting industry interested."

But a Syracuse manufacturer observed: "Any governor who's got the oomph, get up and go to take his sample case in hand and get out and work for his state—I'd like to meet him."

II. Other Salesmen

Not all governors are motivated by the same need as Gov. Marland. Some are feeling an influx of people from elsewhere and want to employ them before they possibly become welfare cases. Some are watching men leaving farms that are becoming more highly mechanized, who cannot find jobs in the cities. Others, mainly farm states, want to cut themselves a slice of the growing U.S. economy, would like plants and payrolls for their own sake.

• **Low-Pressure Approach**—Gov. LeRoy Collins of Florida is one who has watched people flock to his state, as settlers and as tourists who might be persuaded to stay if they could find suitable work.

His approach has been low key. Collins' advisers have contacted top executives in northern cities ahead of time, asked them to invite their fellow businessmen to meet him. He also has made a play for financial men who could buy, and sell, bonds for Florida's governmental units.

In his spiel, Gov. Collins thanks these people for helping to put plants in Florida and for helping to raise capital for the state. When they are ready to expand, he continues, they might think of Florida.

• **Advance Notice**—Collins has so minded his manners that when he got ready to go to Boston, he notified

HE SHALL HAVE MOBILITY WHEREVER HE GOES

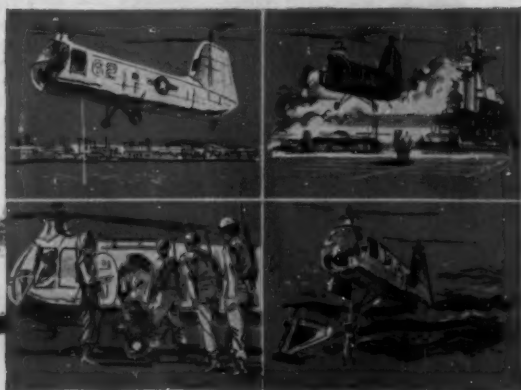
He serves in the most modern of naval forces. Radar warned, missile and jet fighter defended, and armed with jet bombers, his task force is bound together by helicopters—Vertol helicopters.

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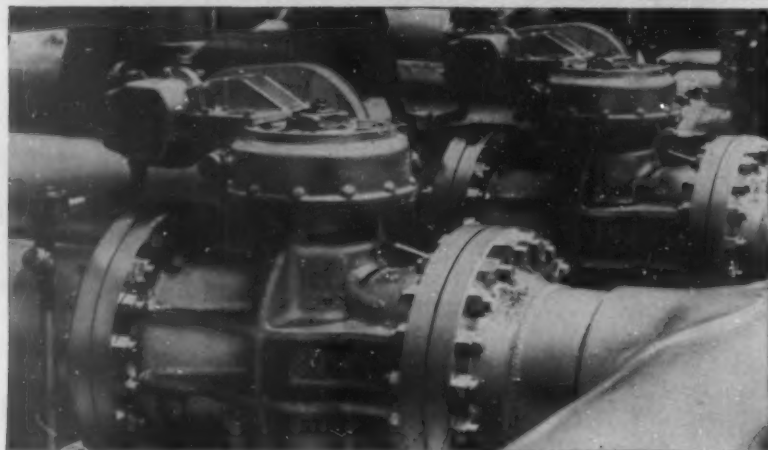
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"... I regard these efforts as important in my desire to do a superior job as Florida's governor' . . ."

GOVERNORS starts on p. 166

Gov. Herter a month before. As a result, Herter himself introduced Collins to key people and spoke at a dinner in Collins' honor. In one city on his itinerary—reportedly in New England—businessmen suggested that Collins not come because of the depressed employment situation. He didn't.

Collins sometimes goes with members of his Florida Development Commission. Other times, he acts alone. Told a company is a prospect for Florida, he may get on the long distance phone or fly to Los Angeles, as he did when he heard Howard Hughes was thinking of building an airplane plant.

"I could have made a good governor without taking on this additional work," Collins says, "but I regard these efforts as highly important in my desire to do a superior job."

• **Different Tack**—Taking a different tack, Gov. Orville L. Freeman of Minnesota chose the New York security analysts for his audience in December and will speak to a similar group in Chicago.

Of course, in New York he also had a closed dinner for top men of blue-chip companies to make an industrial pitch and a meeting with travel editors to sell Minnesota tourist attractions.

Like other governors, Freeman has had to convince the home folk of the merit of such an excursion. Unlike others, he also has felt an obligation to convince Republican businessmen that he isn't growing horns or frothing at the mouth because his political affiliation is Democrat-Farmer-Labor.

• **Arkansas Traveler**—Gov. Orval E. Faubus of Arkansas has had considerable help from Winthrop Rockefeller, chairman of the Arkansas Industrial Development Commission, in gaining entrance to high places in business. "He has given more of his time and prestige than we had even hoped for," Gov. Faubus said. Rockefeller has made trips as well as the governor.

Gov. Goodwin J. Knight of California, who regards industrial solicitation as part of his job because the state has no official agency for it, has been to Wilmington, Del., to lunch with du Pont, to Detroit to breakfast with American Motors, to New York to talk to Olin Mathieson about building a paper plant in California.

• **Help From Businessmen**—Gov. Raymond Gary's trips have been supplemented by trainloads of Oklahoma

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This new Reynolds invention is exciting interest in many industries. In refrigerator evaporators, Tubed Sheet *One-Side-Flat* permits direct contact of the flat side with food packages and ice cube trays thus speeding heat transfer, providing faster freezing. As a *skin for aircraft*, its flat side provides a smooth exterior and the entire sheet can be cooled through the integral tubing offering a possible solution to the "heat barrier" faced by supersonic planes. In radiant heating panels for buildings, its flat surface can be finished in a variety of decorative ways and used to face room

interiors while hot water is circulating through the integral passageways on the other side of the sheet.

Why not investigate Reynolds Tubed Sheet *One-Side-Flat* for application in your industry? Whether transportation, chemical, petroleum, construction, appliance or other industry, you'll find it an intriguing new material—for amazingly flexible heat transfer use or for other uses your ingenuity may devise. For details contact your nearest Reynolds Office or write direct. *Reynolds Aluminum Fabricating Service, 2085 South Ninth Street, Louisville 1, Kentucky.*

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businessmen, knocking on doors in the North and East. They pay their own way. Like others, Gary says he doesn't make outrageous promises or play on the theme of cheap labor. He feels the prestige of the governor's office definitely helps in his rounds, thinks businessmen want to see for themselves what type guy a governor is and what type government he heads.

Gov. S. Marvin Griffin of Georgia has made addresses at affairs set up by the State Chamber of Commerce. The chamber has succeeded in finding sponsors such as Continental Can's Lucius Clay and Sears, Roebuck's Robert E. Wood. Hosts even have picked up the tab for Georgia.

While the traveling governors have been making hay, the governors on the defense have reacted differently. Connecticut's Ribicoff has gone after industry himself. New York's Commissioner of Commerce, Edward T. Dickinson, has had "no comment" on invaders and made an occasional speech himself; Albany officials say he is the man for this because it's beneath Averell Harriman's dignity. Pennsylvania's Gov. George M. Leader has been occupied with state legislation and Ohio's Frank J. Lausche has been involved in politics.

III. Results

What results have the governors had?

None boasts of landing any big fish. They feel dividends are yet to come, and meantime they have nurtured a favorable attitude toward their states. Too, they agree that they merely want to bend industry in the state's direction, and leave it up to local communities to go after companies on sites.

• **Enduring Role?**—Whether a governor's role as an industrial salesman is to be enduring remains to be seen. None seems to be giving up, the election year notwithstanding. Most likely they will not replace banks, utilities, railroads, chambers of commerce, and state industrial departments. But they do feel their office is sufficient to attract a top-echelon executive to hear a luncheon pitch, while the same executive might show complete disinterest in what a fellow businessman had to say.

The chief executives seem to be sensitive to hostility and are trying hard to preserve good fellowship. In Boston, sentiment is that West Virginia, as well as previous Oklahoma and Mississippi groups, have spent money on unproductive junkets, been played up in newspapers unnecessarily as pirates.

But West Virginia's Marland doesn't appear to be bothered. "One of our jobs is to publicize West Virginia," he said. "We certainly got a lot of help in Connecticut." **END**



Picture of customer and his identification is made by pressing button on Recordak ID Microfilmer

Old as he claims?

This new Recordak Microfilmer protects the owner . . . takes pictures of 4 customers and their identifications for 1¢

Selling alcoholic beverages to minors can lead in many states to loss of license or heavy fine . . . and the burden of proof lies squarely on the owner.

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Financial Vice President



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The Board of Directors has declared a quarterly dividend of 25¢ per share on the outstanding Common Stock of the Company, payable on June 30, 1956, to stockholders of record at the close of business on June 14, 1956. Checks will be mailed.
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clues

The Income Pattern: Business Week's Regional Income Indexes

U.S. Incomes: Up 6.5% From Last Year



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Federal Reserve District	% Change vs. year ago	The Indexes		
		Mar. 1956	Feb. 1956	Mar. 1955
1. Boston	+2.1%	263.4	270.7	257.9
2. New York	+4.4%	286.2	285.5	274.1
3. Philadelphia	+4.2%	278.7	282.1	267.4
4. Cleveland	+11.7%	334.2	337.0	299.1
5. Richmond	+7.4%	353.3	347.5	329.0
6. Atlanta	+9.3%	424.0	421.4	388.0
7. Chicago	+7.6%	338.1	335.8	314.3
8. St. Louis	+5.1%	317.8	314.1	302.4
9. Minneapolis	+4.6%	340.0	334.5	325.1
10. Kansas City	+1.6%	390.7	387.1	384.5
11. Dallas	+8.7%	472.4	467.9	434.7
12. San Francisco	+7.3%	374.8	366.9	349.3
Nation	+6.5%	335.9	334.2	315.4

1941 = 100; adjusted for seasonal, March figures preliminary; February revised.

The Fattest Paychecks Ever

U.S. incomes hit a new peak in March, 1956, according to BUSINESS WEEK Composite of Regional Income Indexes. Incomes were 6.5% above March, 1955. Largest gains over one year ago were recorded in Cleveland, Atlanta, Dallas, Richmond, and San Francisco—ranging between 11.7% and 7.3%.

The March pattern of year-to-year changes was not significantly different from February's 6.7% gain. The March rise, however, brought new income peaks in six regions—Richmond, Atlanta, St. Louis, Minneapolis, Dallas, and San Francisco—as well as in the U.S. as a whole.

• **Variations**—From February to March the nation's income increased 0.5% for the 12 regions individually, changes ranged from a 2.2% gain in San Francisco down to a 2.7% slide in Boston.

Some of San Francisco's rise can be attributed to employment increases between February and March—contract construction employment in California reached a March record because of a larger-than-seasonal gain. This was partly due to catching up with backlogs developed during the winter period of bad weather and a work stoppage.

In the Boston district, employment did not quite make its usual February-to-March rise. Localized employment losses in textiles, leather, and jewelry were reported in Massachusetts, with over-all manufacturing employment remaining at the February level. New Hampshire reported that the early Easter hastened seasonal decreases in shoe employment. In Maine, manufacturing employment was off about 3% from February to March, with declines in shoes and lumber. **END**



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Management Digest

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REGIONS BRIEFS

Doubling tax on Kentucky's whiskey production, from 5¢ to 10¢ a gallon, is threatening to drive distilleries out of the state. Gov. A. B. Chandler's appeal to the General Assembly to repeal its action came too late. Companies with facilities in other states talk of moving their blending operations out of Kentucky.

Colorado's General Assembly turned down Gov. Edwin C. Johnson's proposal for using state funds to build a tunnel under the Continental Divide, passed the buck to Washington in hopes of getting federal help under the new highway program.

Interior Dept. and Georgia Power have signed a contract, ending the public-private power dispute concerning Savannah River's Clark Hill Dam. It was in line with last fall's agreement (BW—Sep. 10 '55, p138) with Georgia Power to take 120,000 kw., transmit most of it to cities and co-ops, and buy up to 40,000 kw. itself.

The Mormon Church, which controls the 500-room Hotel Utah and 200-room Temple Square Hotel in Salt Lake City, is going into the motel business with a \$1.5-million, 175-unit place.

The final link between the New Jersey and Pennsylvania turnpikes—a six-lane, \$15-million bridge across the Delaware River—was opened last week. Financed jointly by the two turnpike authorities, the span will cut 90 minutes off driving time between New York and the Midwest.

Hawaiians wondered this week if the Kaiser-Hilton deal to build a 400-room hotel in Honolulu is off. Hilton Hotels has been discussing a hotel with other interests, reportedly Clint Murchison, Jr., of Dallas and Paul Trousdale of Los Angeles, while Henry J. Kaiser has signed Western Hotels to operate his Hawaiian Village.

More people will be employed in industry than in agriculture in the Great Plains by 1960, Pres. Charles N. Kimball of the Midwest Research Institute predicted in Kansas City. To adjust to such transition will require a changed psychological outlook, Dr. Kimball said, and to achieve it will require emphasis on research.

Visiting firemen—2,265,000 of them—attended a record number of 756 conventions in New York City last year. They stayed an average of four days, the state reports, and spent \$175—hotels got \$58 of it, retail stores \$43.



Boxcar maintenance costs are lower with plywood sidings that retain original appearance longer, are extra durable, and have a high strength/weight ratio.

plywood boxcars save money over the long run

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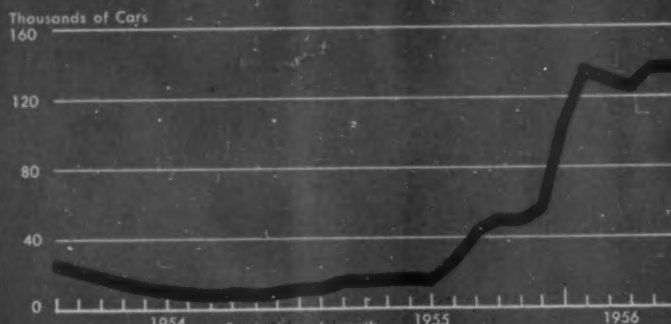
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CHARTS OF THE WEEK

Unfilled Orders for Freight Cars



Data: American Railway Car Institute and Assn. of American Railroads.

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Backlog Stays High

Unfilled orders for new freight cars rose on May 1 to 137,436 cars—highest backlog since May 1, 1951, when 138,319 freight cars were on order. The rise came despite the high level of April deliveries.

April deliveries of new freight cars to

the railroads amounted to 5,943, only six cars short of March's total. And the March delivery was the highest since 6,137 deliveries in November, 1953.

New orders placed in April rose sharply to 6,559 compared with 1,618 a month earlier and 2,706 a year earlier.

Trend of Newsprint Consumption



Data: American Newspaper Publishers Assn.

©BUSINESS WEEK

Still Rising Steeply

Consumption of newsprint in the U.S. continued at record levels in April. Newspapers that report to the American Newspaper Publishers Assn. used 461,800 tons of newsprint in April. This was a record for this month—6.9% more than in April, 1955.

Consumption in the first four months this year was up 5.5% from the comparable year-ago period. The sharp rise

that began last year is credited chiefly to increased advertising as business activity picked up.

Production in the U.S. and Canada combined was 656,700 tons in April—an all-time high for the month. But supply remained tight. Inventories at mills in the U.S. and Canada totaled 151,700 tons on Apr. 30, compared with 177,400 tons a year earlier.

ADVERTISERS IN THIS ISSUE

Business Week—June 2, 1956

ACME STEEL CO.	142
Agency—Fuller & Smith & Ross, Inc.	
ALLISON DIV. GENERAL MOTORS CORP.	168
Agency—Kudner Agency, Inc.	
AMERICAN CYANAMIDE CO.	21-23
Agency—Hazard Adv. Co., Inc.	
AMERICAN MUTUAL LIABILITY INSURANCE CO.	35
Agency—Compton Adv., Inc.	
ANF ATOMICS INC. SUB. OF AMER. MACHINE & FOUNDRY CO.	5-7
Agency—Fletcher B. Richards, Inc.	
THE ANACONDA CO.	24
Agency—Kernon & Eckhardt, Inc.	
ARMSTRONG CORK CO.	102
Agency—Batten, Barton, Durstine & Osborn, Inc.	
ATLAS POWDER CO.	17
Agency—The Altkin-Krystel Co.	
AUTOMATIC STEEL PRODUCTS, INC. (MERCURY CLUTCH DIV.)	108
Agency—Howard Swink Advertising Agency, Inc.	
AUTOMATIC TRANSPORTATION CO.	73
Agency—Rothschild & Ross, Inc.	
BAKELITE CO. DIV. OF UNION CARBIDE & CARBON CORP.	163
Agency—J. M. Mathes, Inc.	
THE BANK OF MONTREAL	108
Agency—Doremus & Co.	
BEHR-MANNING CORP.	69
Agency—Feltman & Kemper, Inc.	
BELDEN MFG. CO.	10
Agency—The Fensholt Adv. Agency, Inc.	
BELW-KNOX CO.	79
Agency—Ketchum, MacLeod & Grove, Inc.	
BODINE ELECTRIC CO.	180
Agency—The Fensholt Adv. Agency, Inc.	
THE BORDEN CO.	177
Agency—Fuller & Smith & Ross, Inc.	
BOSTITCH, INC.	107
Agency—N. W. Ayer & Son, Inc.	
BRISTOL BRASS CORP.	173
Agency—Sutherland-Abbott	
BULLDOG ELECTRIC PRODUCTS CO.	83
Agency—MacManus, John & Adams, Inc.	
BURROUGHS CORP.	151
Agency—Campbell-Ewald Co.	
CARPENTER STEEL CO.	100
Agency—Beaumont, Heller & Sperling, Inc.	
CARRIER CORP.	69
Agency—N. W. Ayer & Son, Inc.	
THE CHASE MANHATTAN BANK	43
Agency—Kernon & Eckhardt, Inc.	
CHICAGO RAWHIDE MFG. CO.	11
Agency—Wiley Arm & Assoc., Inc.	
C. I. Y. CORP.	129
Agency—Fuller & Smith & Ross, Inc.	
CLARK EQUIPMENT CO., CONSTRUCTION MACHINERY DIV.	134
Agency—Marsteller, Richard, Gebhardt & Reed, Inc.	
CLUES (CLASSIFIED ADVERTISING)	170
COLUMBIA-SOUTHERN CHEMICAL CORP.	123
Agency—Ketchum, MacLeod & Grove, Inc.	
CONTINENTAL CAN CO.	80-91
Agency—Batten, Barton, Durstine & Osborn, Inc.	
THE COOPER-BESSEMER CORP.	48
Agency—The Griswold-Eshleman Co.	
COPPER & BRASS RESEARCH ASSN.	121
Agency—J. M. Mathes, Inc.	
CROMPTON-RICHMOND (FACTURING DIV.)	136
Agency—Gore-Servier, Inc.	
DETECTO SCALES, INC.	47
Agency—J. M. Kemlinger & Assoc.	
ALLEN B. DU MONT LABORATORIES, INC.	173
Agency—Campbell-Ewald Co.	
E. I. DU PONT DE NEMOURS & CO.	138
Agency—Batten, Barton, Durstine & Osborn, Inc.	
EDMONT MFG. CO.	76
Agency—Maurice Mullay, Inc.	
EMHART MFG. CO.	88
Agency—The Charles Brunelle Co.	
ENJAY CO., INC.	127
Agency—McCann-Erickson, Inc.	
EXIDE INDUSTRIAL DIVISION—THE ELECTRIC STORAGE BATTERY CO.	40
Agency—Gray & Rogers	
FACIT, INC.	84
Agency—Anderson & Cairns, Inc.	
FINNELL SYSTEM, INC.	12
Agency—John A. Reed & Co., Inc.	
THE FIRST NATIONAL BANK OF CHICAGO	144
Agency—Foote, Cone & Belding	
FORD INSTRUMENT CO., DIV. OF SPERRY RAND CORP.	141
Agency—G. M. Basford Co.	
FRIDEN CALCULATING MACHINE CO., INC.	68
Agency—J. Walter Thompson Co.	
GEMAR ASSOCIATES	174
Agency—Troland, Inc.	
GENERAL DYNAMICS CORP. (ELECTRO DYNAMICS DIV.)	46
Agency—Gotham-Vladimir Adv., Inc.	
GENERAL ELECTRIC CO.	82-98
Agency—G. M. Basford Co.	
GENERAL ELECTRIC CO. (LAMP DEPT.)	9-9
Agency—Batten, Barton, Durstine & Osborn, Inc.	

GENERAL PRECISION EQUIPMENT CORP.	147
Agency—Gear, DuBois & Co., Inc.	
GENERAL PRECISION LABORATORY, INC.	149
Agency—Gear, DuBois & Co., Inc.	
GLOBE-WERNICKE CO.	118
Agency—Strachan & McKim	
THE G. F. GOODRICH CHEMICAL CO. 4th Cover	
Agency—The Griswold-Eshleman Co.	
GOODYEAR TIRE & RUBBER CO., INC. (CHEMICAL DIV.)	2nd Cover
Agency—Kudner Agency, Inc.	
GRAFLEX, INC.	86
Agency—Hutchins Adv. Co., Inc.	
GRAYBAR ELECTRIC CO.	16
Agency—G. M. Basford Co.	
HAMILTON WATCH CO.	110
Agency—Beaumont, Heller & Sperling, Inc.	
JOHN HANCOCK MUTUAL LIFE INSURANCE CO.	118
Agency—McLean Robinson, Inc.	
HARVEY ALUMINUM (DIV. OF HARVEY MACHINE CO., INC.)	3rd Cover
Agency—Hixon & Jorgensen, Inc.	
HERCULES MOTORS CORP.	78
Agency—The Jay H. Malsh Co.	
E. F. HOUGHTON & CO.	77
Agency—Beaumont, Heller & Sperling, Inc.	
INTERNATIONAL BUSINESS MACHINES CORP.	117
Agency—Benton & Bowles, Inc.	
JOHNS-MANVILLE DUTCH BRAND DIV.	88
Agency—Waldie & Briggs, Inc.	
JOY MFG. CO.	80
Agency—W. S. Walker Adv., Inc.	
KEARNEY & TRECKER CORP.	57, 174
Agency—Klau-Van Pietenom-Dunlap, Inc.	
KEASBEY & WATSON CO.	86
Agency—Gear-Martin, Inc.	
KEYSTONE STEEL & WIRE CO.	188
Agency—Thomson Adv., Inc.	
KOPFERS CO., INC. (WOLMAN PRESERVATIVE DIV.)	14
Agency—Batten, Barton, Durstine & Osborn, Inc.	
LAZARD FRERES & CO.	70
Agency—Albert Frank-Gunther Law, Inc.	
LDW'S, INC.	174
Agency—Doremus & Co.	
LUKENS STEEL CO.	97
Agency—J. M. Mathes, Inc.	
LYON METAL PRODUCTS, INC.	81
Agency—Heinrich, Meyer & Finn, Inc.	
MAINTENANCE, INC.	146
Agency—Palm & Patterson, Inc.	
MANAGEMENT DIGEST	178
THE MARLEY CO.	102
Agency—Valentine-Radford	
THE MCBOE CO.	13
Agency—C. J. LaBorde & Son, Inc.	
MCGRAW-HILL PUBLISHING CO., INC.	188-189
MEILINK STEEL SAFE CO.	148
Agency—Blaco Adv. Agency	
METALS & CONTROLS CORP. SPENCER THERMOSTAT DIV.	124
Agency—Sutherland-Abbott	
THE MICHAELS ART BRONZE CO., INC.	86
Agency—Jaap-Or Co., Inc.	
MISSOURI PACIFIC LINES	186
Agency—D'Arcy Adv. Co.	
MITCHELL MFG. CO.	122
Agency—Rothbardt & Hase Adv., Inc.	
MOORE BUSINESS FORMS, INC.	100-101
Agency—N. W. Ayer & Son, Inc.	
MOBINEE PAPER MILLS CO.	88
Agency—Klau-Van Pietenom-Dunlap, Inc.	
NATIONAL COAL ASSN.	87
Agency—VanSant, Dugdale & Co., Inc.	
NATIONAL MOTOR BEARING CO., INC.	182
Agency—L. C. Cole Co.	
NATIONAL STANDARD CO.	123
Agency—The Griswold-Eshleman Co.	
NEPTUNE METER CO.	80
Agency—W. L. Towne	
NEW DEPARTURE DIV. GENERAL MOTORS CORP.	137
Agency—D. P. Brother & Co.	
NORTH AMERICAN VAN LINES, INC.	81
Agency—Applegate Adv. Agency	
OLIVETTI CORP. OF AMERICA	72
Agency—Geyer Adv., Inc.	
OXFORD PAPER CO.	180
Agency—Charles W. Hoyt Co., Inc.	
OZALID DIV. (GENERAL ANILINE & FILM CORP.)	87
Agency—Batten, Barton, Durstine & Osborn, Inc.	
PACIFIC INTERMOUNTAIN EXPRESS	86
Agency—Brascher, Wheeler & Staff	
PAGE FENCE ASSN. (AMERICAN CHAIN & CABLE CO., INC.)	118
Agency—Reinson, Meyer & Finn, Inc.	
PANGBORN CORP.	189
Agency—VanSant, Dugdale & Co., Inc.	
PITTSBURGH CORNING CORP.	81
Agency—Ketchum, MacLeod & Grove, Inc.	
PITTSBURGH PLATE GLASS CO. (PAINT DIV.)	188
Agency—Mason, Inc.	

PROVINCE OF ONTARIO, DEPT. OF TRAVEL & PUB.	124
Agency—McKlin Adv. Ltd.	
RADIO CORP. OF AMERICA	80
Agency—Al Paul Lofton Co., Inc.	
RAND DEVELOPMENT CORP.	189
Agency—Ralph Leavenworth	
RAYBESTOS-MANHATTAN, INC.	39
Agency—Gray & Rogers	
THE RAYMOND CORP.	170
Agency—Taylor M. Ward, Inc.	
RECORDAK CORP. (SUB. OF EASTMAN KODAK)	170
Agency—J. Walter Thompson Co.	
REMINGTON RAND, DIV. OF SPERRY RAND CORP.	80
Agency—Lorford Adv. Agency, Inc.	
REVOLVATOR CO.	114
Agency—Fredricks & Co., Inc.	
REYNOLDS METALS CO.	171
Agency—Clinton E. Frank, Inc.	
RHEEN MFG. CO.	187
Agency—Campbell-Ewald Co.	
ROBBINS & MYERS, INC.	74-75
Agency—Erwin, Wacey & Co., Ltd.	
ROCKWELL MFG. CO. (NORSTROM VALVE DIV.)	170
Agency—Marsteller, Richard, Gebhardt & Reed, Inc.	
ROHM & HAAS CO. (PLASTICS DIV.)	39
Agency—Armit, Preston, Chapin, Lamb & Keen, Inc.	
JOSEPH T. RYERSON & SON, INC.	18
Agency—Callins & Holden, Inc.	
SALOMON BROS. & HUTZLER	184
Agency—Albert Frank-Gunther Law, Inc.	
SEABOARD & WESTERN AIRLINES, INC.	183
Agency—Hazard Adv. Co., Inc.	
SHAW WALKER CO.	149
Agency—J. Walter Thompson Co.	
R. H. SHEPPARD CO.	180
Agency—The William B. Kamp Co.	
SUGAR BEET PRODUCTS	120
Agency—Whipple & Black Adv. Co.	
TUBE METHODS, INC.	118
Agency—John Miller Adv. Agency	
UNION CARBIDE & CARBON CORP.	44
Agency—J. M. Mathes, Inc.	
VEEDER-ROOT, INC.	4
Agency—Sutherland-Abbott	
VERTOL AIRCRAFT CORP.	189
Agency—Gaynor Colman Prentiss & Varley, Inc.	
VICTOR CHEMICAL WORKS	39
Agency—Russell M. Seeds Co.	
WAGNER ELECTRIC CORP.	118
Agency—Arthur B. Moege, Inc.	
WARNER & SWABEY CO.	15
Agency—The Griswold-Eshleman Co.	
WASSELL ORGANIZATION	180
Agency—James R. Flanagan Adv. Agency	
ALFRED ALLEN WATTS CO., INC.	114
Agency—Myron Jones Co.	
WESTERN ELECTRIC CO.	8
Agency—Cunningham & Walsh, Inc.	
WESTINGHOUSE BROADCASTING CO., INC.	82-83
Agency—Ketchum, MacLeod & Grove, Inc.	
WORTHINGTON CORP.	111
Agency—Needham, Louis & Brerby, Inc.	
YORK CORP.	130-131
Agency—G. M. Basford Co.	
L. A. YOUNG SPRING & WIRE CORP.	112-113
Agency—Simmer, Keller & Cairns, Inc.	

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Monetary Controls: The Theory Lags

The current dispute over the Federal Reserve System's credit policy has given rise to two separate proposals that merit serious attention.

One was made by Rep. Wright Patman of Texas, who is Congress' self-appointed watchdog on Federal Reserve matters. He has demanded that officials state their views in public hearings (page 29).

The other came from Allan Sproul, retiring president of New York's Federal Reserve Bank, who, in a valedictory address, proposed that the President appoint a commission to make a broad national inquiry into our financial institutions.

What these two proposals have in common is a desire to throw more light on the effect of monetary policy. Patman's plan is aimed at clarifying the present situation—the pros and cons of the Fed's most recent tightening moves. Sproul, on the other hand, seeks to study the entire history of our monetary system in order to improve its functioning.

We think both proposals should be acted on. Although we have not agreed with Patman's position on most matters of Fed policy, his plan to hold hearings could serve a constructive purpose in revealing how the Fed and the Administration came to differ over policy.

Such an inquiry should not attempt to censure anyone but to define and clarify the areas of responsibility and independence held by the Fed.

A thorough examination of our financial system is long overdue. There was once a time when more was known about central banking than almost any other field of economic theory. In fact, the use of indirect monetary controls by a central bank was the first real attempt at government intervention in free enterprise economics.

But over the past two decades, other economic weapons have been developed and have gained widespread acceptance. In the 1930s and 1940s, the central bank lost its pivotal role. Moreover, the function of monetary policy, and what it can or cannot do under changing conditions, was never examined. Today the study of monetary theory seriously lags behind other fields of economics.

Now that the Fed has regained its independence, this lack of knowledge is a great handicap. The Fed has done its best to reshape itself to meet new conditions, but it has been a piecemeal and pragmatic adjustment. As Allan Sproul himself said, "We cannot afford much longer . . . to go ahead not really knowing what to expect of our central banking system, of our commercial banking system, of our savings banks and building and loan associations, of our insurance companies and pension trusts, and of all the other bits and pieces which we are using to try to keep our production facilities and our credit facilities in balance."

This is a remarkable admission from the dean of America's central bankers. Our reliance on monetary controls makes it imperative that we know more about their limits and their powers. Both Patman's and Sproul's proposals would help increase our understanding and our knowledge.

Social Enterprise

This week the Supplementary Unemployment Benefit system begins in the auto industry where it was conceived. It is extremely complex and opens a whole universe of exasperating administrative problems (page 54). Already there is open talk in union ranks and mutterings in management to the effect that life would be simpler if the government would take over the whole program.

The yearning for such relief may be understandable, but it is very bad medicine. Here—whether it is good or bad is still to be seen—is a piece of social and economic pioneering. It was initiated neither by fiat nor statute but voluntarily, by free economic groups. It's up to them to make it work or submit perforce the damaging confession that the enterprise system can't manage social enterprise.

Giveaway Pays Off

In the 1952 Presidential campaign, one of the bitterest issues was control of the Tidelands.

One of the first steps taken by the Congress was to pass legislation giving the states control of the Tidelands out to the historic state boundaries. The federal government was given control of the waters beyond these boundaries.

The hope was that this dual system of state-federal control would provide maximum development of these vast oil reserves. Yet, many critics labeled the Tidelands Act a federal "giveaway."

Those who took this viewpoint might be interested in recent figures issued by the Interior Dept. In the 1947-1952 period when the federal government claimed sole control over the Tidelands, it received less than \$10-million in payments. Companies couldn't know whether the states or federal government would ultimately control the area, so they stayed out.

Since Congress cleared up the confusion in 1953 with the Tidelands Act, the government has received \$260-million for drilling rights.

And the \$260-million is only a starter. The government receives a 12½% royalty on every barrel of oil produced. As the flow of oil increases—and it's estimated it will reach 400,000 barrels a day by 1960—the government take will fatten proportionately.

Aluminum impact extrusion is component in hydraulic system. Requires practically no machining.

which is the **MOST VALUABLE MAN?**

Researcher

Designer

Metallurgist

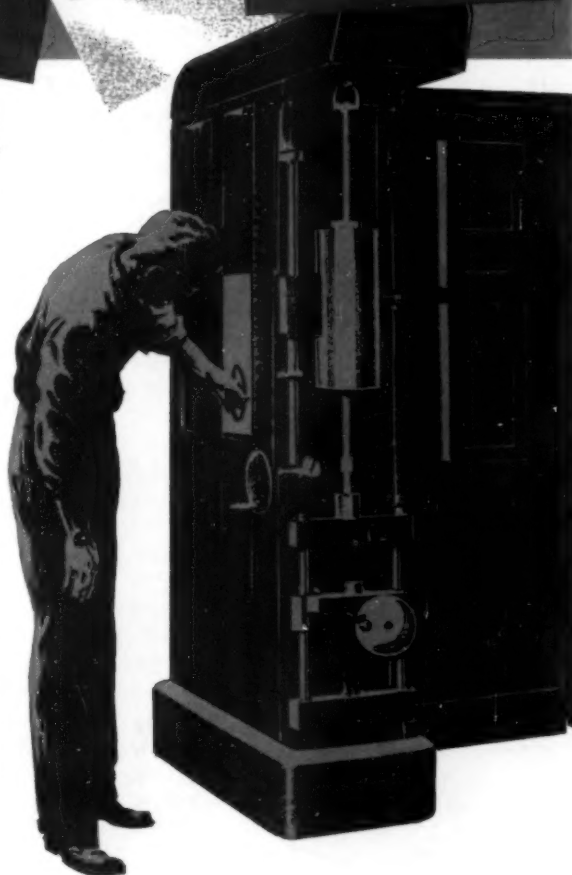
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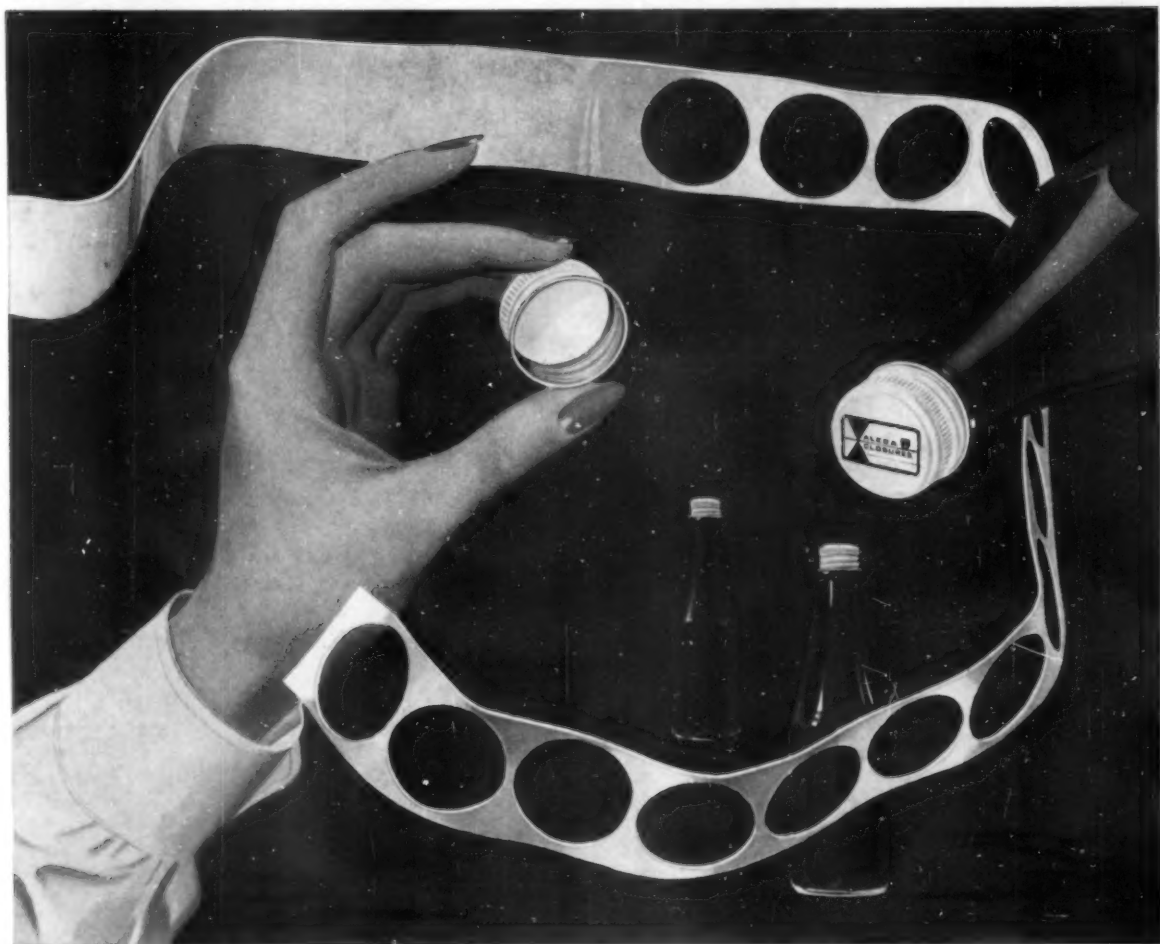
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